Air Quality in Ontario 1987

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AIR QUALITY IN ONTARIO
1987

A review of the air quality monitoring program

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EXECUTIVE SUMMARY

In 1987, the routine air monitoring program in Ontario included the measurement of nine gases at up to 72 locations and the measurement of particulates at 136 locations.

For gases, the provincial criterion most frequently exceeded was that for ozone as the result of medium- and long-range transport from the United States. Of 38 ozone-monitoring stations, 35 exceeded the criterion at least once during the year. Sulphur dioxide and total reduced sulphur criteria were exceeded at some stations as well. The 10-year trends indicate improvement for sulphur dioxide and carbon monoxide, but little change in hydrocarbons, ozone and nitrogen oxides.

For particulates, the 24-hour criterion for total suspended particulate was frequently exceeded: 111 of 136 stations recorded at least one reading higher than the criterion during the year. The one-year criterion was exceeded at 34 stations. Lead measurements at four stations exceeded the criterion, but no other particulate criteria were exceeded. The 10-year trends show improvement in total suspended particulate as well as in each of the commonly monitored metals: copper, iron and lead.

The Air Pollution Index (API), which is the basis of the alert system for air pollution control in Ontario, was higher than the advisory level of 32 at Hamilton only. There were two such occurrences in 1987 with a maximum API of 38 on October 17.

INTRODUCTION

This report describes the 1987 Ontario air quality monitoring program including a summary of the measurements of gases and particulate matter during the year. It is intended for use in conjunction with an appendix which appears in a separate volume.

In order to ensure that the ambient air quality data are of the highest quality, the Air Resources Branch maintains a reference standards laboratory, where quality control and quality assurance programs adhere to both the U.S. National Bureau of Standards and Environment Canada's Pollution Measurement Division standards. Quarterly performance audits of the monitoring equipment and the data acquisition system in the Ministry of the Environment (MOE) network are also carried out.

In this report, the following are discussed for each pollutant: characteristics, effects, Ontario criteria (if any), sources, method of monitoring, locations (and frequency) of sampling, summary of sampling results, and 10-year trend.

Also, tables provide the location of stations and supply sample distribution information which includes means, maxima and the number of exceedances of the Ontario criteria.

The entire continuous (hourly) network is summarized in Appendix Table A-1 and Maps 1 and 2. This table gives station name, numerical identifier, and an indication of the "continuous" pollutants measured. Letter codes indicate whether data are telemetered or chart-read.

The "continuous" pollutants include SP (suspended particles) as well as the following gases:

SO_2 (sulphur dioxide)
CO (carbon monoxide)
O_3 (ozone)
NO_2 (nitrogen dioxide)
NO (nitric oxide)
NO_x (total nitrogen oxides)
THC (total hydrocarbons)
RHC (reactive hydrocarbons)
TRS (total reduced sulphur)

Section A of this report describes each of the "continuous" pollutants in sequence. Section B deals with the Air Pollution Index over the past 10 years.

The particulate (daily) network is summarized in Appendix Table A-3 and Maps 3 and 4. This table provides the station name, numerical identifier and various "daily" pollutants measured. Also, numerals indicate the monitoring cycle frequency in days. Some additional codes are defined in the key at the top of the table. The main particulate pollutants measured are:

TSP (total suspended particulate)
Cd (cadmium)
Co (cobalt)
Cr (chromium)
Cu (copper)
Fe (iron)
Mn (manganese)
Ni (nickel)
Pb (lead)
V (vanadium)
NO_3^- (nitrate)
SO_4^{--} (sulphate)

Section C describes each of the "daily" or particulate pollutants under the headings of TSP, Lead, Trace Metals, Nitrate and Sulphate.

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GLOSSARY

COH – a measure of the amount of light scattering by particulate matter

criterion – a recommended maximum ambient air exposure (based on effects)

detection limit – the minimum air concentration of a pollutant that can be determined by an analytical method

exceedance – an occurrence which exceeds the Ontario standard

geometric means – calculated by taking the nth root of the product of all (n) values in a data set
– provides a better indication than arithmetic mean of central tendency for a small data set with extreme values

percentile value – the percentage of the data set that lies below the stated value
– for example, if the 70 percentile value is 0.10 ppm, then 70% of the data are below 0.10 ppm

primary pollutant – a pollutant which is directly emitted to the atmosphere

secondary pollutant – a pollutant which is formed from other pollutants present in the atmosphere

"continuous pollutants" – a pollutant for which a continuous record exists; usually pollutants which have hourly average readings (maximum 8760 values per year)

"daily" pollutant – a pollutant for which there exists only a 24-hour or daily value (maximum 365 values per year)

ABBREVIATIONS

AQC – air quality criterion

COH – coefficient of haze

ppb – parts (of pollutant) per billion (parts of air)

ppm – parts (of pollutant) per million (parts of air)

$\mu g/m^3$ – micrograms (of pollutant) per cubic metre (of air)

SECTION A POLLUTANTS MEASURED BY CONTINUOUS MONITORING (HOURLY DATA)

SO_2

SULPHUR DIOXIDE

1.1 Characteristics

- Colorless gas
- Strong, pungent odor over 0.5 ppm

1.2 Effects

One-hour average

less than 0.16 ppm – no known effects
0.16 ppm – injurious to sensitive species of vegetation in combination with ozone
0.34 ppm – odorless, increasing vegetation damage
2.00 ppm – increasing sensitivity of asthmatics and bronchitics

1.3 Ontario Criteria

0.25 ppm (one hour)
0.10 ppm (24 hours)
0.02 ppm (one year)

1.4 Sources

80% of the SO_2 emitted in Ontario originates from non-ferrous smelters and electric utilities. The rest comes from industrial sources including iron ore smelters, petroleum refineries, pulp and paper mills and area sources including vehicles and residential, commercial and industrial heating.

1.5 Method of Monitoring

- Fluorescent excitation of SO_2 by ultraviolet radiation

1.6 Locations of Monitoring

The Appendix provides a description of the provincial SO_2 network (Table A-1).

SO_2 monitoring was carried out at 72 locations in 1987.

1.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; and the maximum one-hour and 24-hour values are provided in the Appendix (Table A-5). Also given are the number of exceedances of the sulphur dioxide criteria (see Section 1.3).

The lowest average levels measured in the province were at Thunder Bay Hospital.

The greatest number of exceedances of the one-hour criterion occurred at Balmertown (sewage treatment plant) and the highest annual mean was measured at Skead.

There were a total of 18 stations which exceeded the hourly criterion at least once and five which exceeded the 24-hour criterion. No station's readings exceeded the annual criterion. (See also Table 1).

1.8 Ten-Year Trend

The trend in mean annual SO_2 at locations which possess a 10-year record is shown in Table A-6 and is summarized for the province in Table 2.

Ambient SO_2 levels improved by about 60% over the 10-year period. This is primarily due to tighter industrial emission controls.

SP

SUSPENDED PARTICLES

2.1 Characteristics

- A relative measure of suspended particulate matter of size most likely to reach the lungs (diameter less than the 5-10 micron range)
- Determined by the amount of soiling caused by air flow on a filter medium

2.2 Effects

One-hour average

less than 2.0 COH units – no known effects
2.0 COH units – decrease in visibility
4.0 COH units – soiling evident
6.0 COH units – increasing sensitivity of asthmatics and bronchitics

2.3 Ontario Criteria

1.0 COH unit (24 hours)
0.5 COH unit (one year)

2.4 Sources

- Industrial processes which include combustion, incineration, construction, mining, metal smelting, processing and grinding
- Automobiles
- Natural sources which include windblown soil, forest fires, ocean spray, volcanic activity

2.5 Method of Monitoring

- Continuous paper tape sampler with sampling inlet and flow rate regulated to favour small particles

SP is determined by drawing a known volume of air through a portion of tape and then measuring the reduction in the light transmitted relative to a clean section of tape.

2.6 Locations of Monitoring

The Appendix provides a description of the provincial SP network (Table A-1).

Suspended particles were measured at 39 locations in 1987.

2.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; the maximum one-hour and 24-hour values; and the number of exceedances of the SP criteria (see Section 2.3) are provided in the Appendix (Table A-7).

The lowest levels measured in the province were at Cornwall (Memorial Park) and Thunder Bay where the SP averaged 0.04 units.

The greatest number of exceedances of the 24-hour criterion occurred at the Mission (381 Yonge Street) in Toronto and the highest measured value was at Windsor (2885 Howard Avenue).

There were a total of 27 stations which exceeded the 24-hour criterion at least once and four which exceeded the one-year criterion (see also Table 1).

2.8 Ten-Year Trend

The trend in mean annual SP at selected Ontario cities is shown in Table A-8 and is summarized for the province in Table 2.

Fine particulate, as determined by SP, has remained relatively constant over the past 10 years.

TRS

TOTAL REDUCED SULPHUR

3.1 Characteristics

- Primarily hydrogen sulphide (rotten egg odor)
- Methyl mercaptans (rotten cabbage odor over 5 ppb)

3.2 Effects

One-hour average

less than 5 ppb	– no known effects
5 ppb	– odor threshold
27 ppb	– extremely odorous
1,000 ppb	– sensitive individuals may suffer nausea and headache due to severe odor

3.3 Ontario Criteria

Methyl mercaptans – 10 ppb (one hour)
Hydrogen Sulphide – 20 ppb (one hour)
TRS (from Kraft Pulp Mills) – 27 ppb (one hour)

3.4 Sources

- Industrial – steel industry, pulp and paper mills, refineries
- Natural – swamps, bogs, marshes

3.5 Method of Monitoring

Reduced sulphur compounds are oxidized to SO_2 followed by fluorescent excitation by ultraviolet radiation.

3.6 Locations of Monitoring

The Appendix provides a description of the provincial TRS network (Table A-1).

TRS monitoring was carried out at 29 locations in 1987.

3.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; and the one-hour and 24-hour maxima are provided in the Appendix (Table A-9).

The lowest average levels measured in the province were at two rural stations in the city of Nanticoke. The highest annual mean (6.1 ppb) and the greatest value measured (296 ppb) occurred at Cornwall (St. Peter's School). (See also Table 1.)

3.8 Ten-Year Trend

Table A-10 shows the trend in mean annual TRS for selected Ontario cities while Table 2 shows the provincial trend, with a minimum in 1985, but an increase in recent years.

CO

CARBON MONOXIDE

4.1 Characteristics

Colorless, odorless.

4.2 Effects

One-hour average

less than 30 ppm	– no known effects
30 ppm	– increased cardiovascular symptoms in smokers with heart disease
50 ppm	– increasing cardiovascular symptoms in non-smokers with heart disease. Some visual impairment.

4.3 Ontario Criteria

30 ppm (one hour)
13 ppm (eight hours)

4.4 Sources

Primary source (about 80%) is motor vehicles. A secondary source is fossil fuel combustion for building, heating and commercial/industrial operations.

4.5 Method of Monitoring

- Non-dispersive infrared photometry based on the preferential absorption of infrared radiation by CO

4.6 Locations of Monitoring

The Appendix provides a description of the provincial CO network (Table A-1).

CO was monitored at 24 stations in 1987.

4.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; and the maximum one-hour and eight-hour values are given in the Appendix (Table A-11).

The lowest levels measured in the province were at Ash Street in Sudbury and the highest mean was at the Mission (381 Yonge Street) in Toronto. The highest measured one-hour and eight-hour values were also at the Mission.

There were no exceedances of the Ontario one-hour criterion of 30 ppm. However, the Mission monitor registered six exceedances of the eight-hour criterion. (See also Table 1.)

4.8 Ten-Year Trend

There has been a 50% decline in ambient CO levels (see Tables 2 and A-12). This is due primarily to tighter controls on automotive emissions.

THC/RHC

HYDROCARBONS

5.1 Characteristics

Primarily methane (colorless, odorless) which is present at about 1.5 ppm in the ambient atmosphere. Non-methane hydrocarbons (or reactive hydrocarbons) are usually present at much lower levels. This fraction reacts with nitrogen oxides in the presence of sunlight to form ozone.

5.2 Effects

There are no known direct effects on health or vegetation at ambient levels.

5.3 Ontario Criteria

None

5.4 Sources

Natural sources include trees and other vegetation and decay of animal and plant material.

Anthropogenic sources include motor vehicles, gasoline storage tanks, petroleum and chemical industries, landfill sites, paint manufacturers and fermentation.

5.5 Method of Monitoring

- Calibrated flame ionization detector

5.6 Locations of Monitoring

The Appendix provides a description of the provincial THC/RHC network (Table A-1).

RHC was monitored at seven stations while THC was monitored at 10 locations in 1987.

5.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; and the maximum one-hour and 24-hour values are given in the Appendix (Tables A-13 and A-15).

The locations and values for the lowest, and highest means are given in Table 1. Windsor (University Avenue) measured the highest one-hour maximum concentration of reactive hydrocarbon during the year. The highest total hydrocarbon value for the year was measured at London (Western Fair Grounds).

5.8 Ten-Year Trend

The trend in THC at the seven stations which have a 10-year record is shown in Table A-14 and is summarized for the province in Table 2. Apart from a temporary dip in 1979 and 1980, THC levels have been relatively constant.

NO_2

NITROGEN DIOXIDE

6.1 Characteristics

- Brown gas
- Pungent, irritating odor over .10 ppm
- Oxidation product of nitric oxide (NO) which is the primary NO_x emission
- Reacts with hydrocarbons in sunlight to form ozone, and with water to form nitric acid, a component of acid rain

6.2 Effects

One-hour average

less than 0.10 ppm	– no known effects
0.10 ppm	– odor threshold
0.25 ppm	– some increase in bronchial reactivity in asthmatics
0.52 ppm	– increasing sensitivity of asthmatics and bronchitics

6.3 Ontario Criteria

0.20 ppm (one hour)
0.10 ppm (24 hours)

6.4 Sources

Anthropogenic – high temperature combustion processes including automobiles, power plants, incinerators and several chemical processes. In Ontario, transportation accounts for about 60% of total No_x emissions.

Natural – lightning, soil bacteria.

6.5 Method of Monitoring

Based on the principle of chemiluminescence involving a gas phase reaction of NO with ozone. For NO_x, the sample stream is passed through a catalytic converter where NO_2 is reduced to NO.

6.6 Locations of Monitoring

The Appendix provided a description of the provincial NO_2 network (Table A-1).

NO_2 monitoring was carried out at 30 locations in 1987.

6.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; and the maximum one-hour and 24-hour values are provided in the Appendix (Tables A-16). Also given are the number of exceedances of the nitrogen dioxide criteria (see Section 6.3).

The lowest levels measured in the province were at rural stations in Dorset and the city of Nanticoke where the arithmetic mean was 2 ppb.

The highest annual mean was measured at the Mission (381 Yonge St.) in Toronto.

No stations exceeded either the one-hour or 24-hour criteria. (See also Table 1.)

6.8 Ten-Year Trend

The 10-year trend in NO_2 at selected Ontario cities as shown in Table A-17 and Table 2 is relatively constant.

NO

NITRIC OXIDE

7.1 Characteristics

- Colorless gas
- Oxidizes to NO_2 in the presence of hydrocarbons and sunlight

7.2 Effects

There are no known direct effects on health or vegetation at ambient levels.

7.3 Ontario Criteria

None

7.4 Sources

- Same as for NO_2

7.5 Method of Monitoring

- Same as for NO_2

7.6 Locations of Monitoring

- Same as for NO_2

7.7 Monitoring Results

Dorset had the lowest mean, while the Mission in Toronto had the highest. (See Appendix Table A-18 for the data summaries.)

7.8 Ten-Year Trend

Tables 2 and A-19 show little change in NO over the past 10 years.

NO_x

TOTAL NITROGEN OXIDES

8.

NO_x is assumed to be the sum of NO_2 and NO concentrations in the atmosphere (in parts per million). Normally, this assumption is valid. (See Appendix Table A-20 for the data summaries.)

O_3

OZONE

9.1 Characteristics

- Colorless gas

Major component of photochemical oxidant compounds formed as the result of chemical reactions between nitrogen oxides and reactive hydrocarbons in the presence of sunlight.

9.2 Effects

One-hour average

less than 50 ppb	– no known effects
80 ppb	– injurious to many species of vegetation
120 ppb	– decreasing performance by athletes exercising heavily
200 ppb	– decrease in lung function in exercising subjects, eye irritation

9.3 Ontario Criteria

80 ppb (one hour)

9.4 Sources

Ozone is produced by photochemical reactions and is not directly emitted into the atmosphere in significant amounts. Since it is formed downwind of nitrogen oxide and hydrocarbon sources and capable of travelling long distances through the atmosphere, ozone is a major manifestation of the long range transport of air pollution. Its formation and transport are dependent on meteorological factors. Low level (tropospheric) ozone should not be confused with upper level (stratospheric) ozone which

gives rise to the naturally occurring "ozone layer". The two layers rarely mix.

9.5 Method of Monitoring

An air sample reacts with ethylene to emit visible light (chemiluminescence) of an intensity directly proportional to the ozone concentration. A number of stations still employ fluorescence for ozone detection.

9.6 Locations of Monitoring

The Appendix provides a description of the provincial O_3 network (Table A-1).

Ozone monitoring was carried out at 38 locations in 1987.

9.7 Monitoring Results

The distribution by percentile of the hourly data; the mean; and the maximum one-hour and 24-hour values are provided in the Appendix (Table A-21). Also given are the number of exceedances of the ozone criterion (see Section 9.3).

The lowest levels measured in the province were at the Science Centre in North York where the arithmetic mean was 8.9 ppb.

The greatest number of exceedances of the one-hour criterion occurred at the CN Tower in Toronto where the height of the monitor is 444 metres. The highest mean concentration for the year was recorded at Tiverton.

There were a total of 35 stations which exceeded the criterion at least once. The highest measured concentration was 170 ppb at Sarnia. (See Table 1.)

9.8 Ten-Year Trend

Table A-22 provides the 10-year trend for O_3 at the stations where a 10-year record exists. Table 2 summarizes the data for the province. Despite some variability at specific sites, the provincial mean has remained relatively constant.

TABLE 1 – HIGHLIGHTS OF CONTINUOUS MONITORING 1987

	SO_2	SP	TRS	CO	THC	NO_2	NO	O_3
LOWEST MEAN								
Location	Thunder Bay Hosp. (63022) Thunder Bay MTC. (63200)	Cornwall (56051) Thunder Bay (63200)	Nanticoke (22904) (22907)	Sudbury (77016)	North York (34002)	Nanticoke (22086) Dorset (49010)	Dorset (49010)	North York (34002)
Concentration	0 ppb	.04 units	0.2 ppb	0.1 ppm	1.72 ppb	2 ppb	0 ppb	8.9 ppb
HIGHEST MEAN								
Location	Skead (77012)	Toronto (31049)	Cornwall (56071)	Toronto (31049)	London (15001)	Toronto (31049)	Toronto (31049)	Tiverton (18007)
Concentration	10 ppb	.78 units	6.1 ppb	3.3 ppm	2.99 ppm	36 ppb	88 ppb	33.0 ppb
MOST CRITERION EXCEEDANCES – 1 HR								
Location	Balmertown (61014)	N/A	Cornwall (56071)	–	N/A	–	N/A	Toronto (31190)
Number	87	N/A	556	0	N/A	0	N/A	170
MOST CRITERION EXCEEDANCES – 24 HRS								
Location	Balmertown (61014)	Toronto (31049)	N/A	N/A	N/A	–	N/A	N/A
Number	7	46	N/A	N/A	N/A	0	N/A	N/A
NUMBER OF STATIONS EXCEEDING 1 HR AQC								
Number	18	N/A	19	0	N/A	0	N/A	35
NUMBER OF STATIONS EXCEEDING 24 HRS AQC								
Number	5	27	N/A	N/A	N/A	0	N/A	N/A
HIGHEST MEASURED VALUE – 1 HR								
Location	Wawa (71069)	Windsor (12038)	Cornwall (56071)	Toronto (31049)	London (15001)	S.S. Marie (71068)	Kitchener (26029)	Sarnia (14064)
Concentration	1180 ppb	4.7 units	296 ppb	25 ppm	14.7 ppm	190 ppb	1060 ppb	170 ppb
TOTAL NUMBER OF STATIONS								
Number	72	39	29	24	10	30	30	38

TABLE 2 – TEN-YEAR TREND FOR "CONTINUOUS" POLLUTANTS

POLLUTANT (UNITS)	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	TOTAL NUMBER OF STATIONS
SO_2 (ppb)	10	9	8	7	7	5	6	6	5	4	18
SP (COH unit)	0.36	0.38	0.32	0.33	0.36	0.33	0.37	0.32	0.32	0.32	11
TRS (ppb)	2.3	2.8	2.5	2.3	2.1	2.0	1.5	1.0	1.6	1.9	4
CO (ppm)	1.2	1.1	0.9	1.0	0.9	0.7	0.7	0.7	0.6	0.7	13
THC (ppm)	2.18	1.87	1.87	2.03	2.09	2.12	2.23	2.24	2.14	2.14	7
NO_2 (ppb)	26	22	21	20	20	19	20	19	20	20	15
NO (ppb)	23	22	17	22	17	17	20	18	19	21	15
O_3 (ppb)	23	20	20	19	20	20	20	21	19	20	18

SECTION B
THE ONTARIO AIR POLLUTION INDEX (API)

10.1 Characteristics

The API is the basis of an alert and control system to warn of deteriorating air quality and is derived from 24-hour running averages of sulphur dioxide and suspended particles. Research studies have linked respiratory illness to high concentrations of sulphur dioxide and particulates.

10.2 Legislation

The Ontario Environmental Protection Act (1971) authorizes the Minister of the Environment to order any source not essential to public health or safety to curtail or cease its operations when air pollution levels which may be injurious to health occur.

10.3 Operation of the System

The API is computed each hour based on the past 24 hourly values for SO_2 and SP. If the index reaches a value of 32 (as for example when SO_2 = 0.1 ppm and SP = 1.0) and if the Duty Meteorologist predicts a continuation of adverse atmospheric conditions for at least six hours, an Air Pollution Advisory is issued. Owners of significant sources of pollution are advised to prepare for possible curtailment of operations.

If the index reaches 50, and if at least six hours of adverse atmospheric conditions are forecasted, owners of major sources will be ordered to curtail operations. This is the First Alert Level.

A Second Alert is issued at an API of 75, and further curtailment may be ordered.

The Air Pollution Episode Threshold Level occurs at an API of 100. If atmospheric conditions are not expected to improve for at least six hours, owners of all sources not essential to public health or safety will be ordered to cease operations.

10.4 Air Pollution Index Levels (1978-1987)

A history of the Air Pollution Index levels over the last 10 years of its operation is provided in Table 3.

TABLE 3
TEN-YEAR HISTORY OF THE AIR POLLUTION INDEX (1978-1987)

YEAR	CITY	NUMBER OCCASIONS ≥32	NUMBER OCCASIONS ≥50	MAXIMUM INDEX	DATE OF MAXIMUM
1978	TORONTO	2	0	45	Nov. 5
	HAMILTON	7	0	43	Nov. 4
	SUDBURY	0	0	31	Jan. 22
	WINDSOR (12008)	1	0	33	Apr. 19
	WINDSOR (12016)	0	0	28	Feb. 18
	WELLAND	0	0	24	Mar. 15
	NIAGARA FALLS	0	0	23	Nov. 4, Mar. 11
	CONISTON	3	0	34	Feb. 7
	NEW SUDBURY	1	0	42	Feb. 2
	SARNIA	3	0	41	Jan. 24
1979	TORONTO	2	0	35	Oct. 18
	HAMILTON	23	1	55	Dec. 22
	SUDBURY	0	0	18	July 7
	WINDSOR (12008)	0	0	31	Feb. 20
	WINDSOR (12016)	0	0	27	Feb. 21
	NIAGARA FALLS	0	0	27	Feb. 21
	CONISTON	0	0	31	Feb. 14
	NEW SUDBURY	0	0	28	Feb. 1
	SARNIA	2	0	43	Feb. 2
	ST. CATHARINES	0	0	29	Nov. 6
1980	TORONTO	0	0	31	Dec. 8
	HAMILTON	5	0	40	Oct. 16
	SUDBURY	0	0	23	Oct. 16
	WINDSOR (12008)	0	0	25	Feb. 8, 9
	WINDSOR (12016)	0	0	25	Dec. 29
	NIAGARA FALLS	0	0	18	May 24
	CONISTON	0	0	30	Feb.10, Mar. 9
	NEW SUDBURY	0	0	24	Jul. 3, Oct. 16
	SARNIA	1	0	39	Mar. 20
	ST. CATHARINES	0	0	28	Feb. 20
1981	TORONTO	3	0	43	Nov. 14
	HAMILTON	8	0	38	Nov. 15
	SUDBURY	0	0	21	Jan. 31
	WINDSOR (12008)	1	0	42	Nov. 17
	WINDSOR (12016)	0	0	31	Nov. 17
	NIAGARA FALLS	0	0	25	Jan. 14
	CONISTON	0	0	20	Nov. 25
	NEW SUDBURY	0	0	22	Jan. 28-29
	SARNIA	1	0	34	Feb. 16
	ST. CATHARINES	0	0	27	Jan. 14-15
1982	TORONTO	3	2	54	Oct. 27
	HAMILTON	12	0	39	Dec. 2
	SUDBURY	0	0	15	Feb. 3
	WINDSOR (12008)	0	0	31	Oct. 26-27
	WINDSOR (12016)	1	0	35	Oct. 27
	NIAGARA FALLS	0	0	19	Jan. 19
	CONISTON	1	0	39	Feb. 5
	NEW SUDBURY	0	0	29	Feb. 5
	SARNIA	0	0	27	Mar. 11, Nov. 7-8
	ST. CATHARINES	0	0	31	Nov. 18

TABLE 3 (CONT.)

TEN-YEAR HISTORY OF THE AIR POLLUTION INDEX (1978-1987)

YEAR	CITY	NUMBER OCCASIONS ≥32	NUMBER OCCASIONS ≥50	MAXIMUM INDEX	DATE OF MAXIMUM
1983	TORONTO	3	0	39	Jan. 29
	HAMILTON	1	0	37	Mar. 2
	SUDBURY	1	0	39	Jan. 22
	WINDSOR (12008)	0	0	26	Sep. 27
	WINDSOR (12016)	1	0	33	Mar. 1-2
	NIAGARA FALLS	0	0	17	Jan. 30
	CONISTON	0	0	19	Jan. 15
	NEW SUDBURY	1	1	63	Jan. 22
	SARNIA	0	0	28	Jan. 29
	ST. CATHARINES	0	0	23	Jan. 30
1984	TORONTO	2	1	50	Jan. 16
	HAMILTON	8	0	44	Nov. 27
	SUDBURY	0	0	23	Feb. 1
	WINDSOR (12008)	0	0	31	Oct. 2, Nov. 14
	WINDSOR (12016)	1	0	40	Feb. 15
	NIAGARA FALLS	0	0	20	Dec. 10-11
	CONISTON	0	0	29	Nov. 22
	NEW SUDBURY	0	0	23	Nov. 22
	SARNIA	0	0	27	Jan. 23
	ST. CATHARINES	0	0	24	Feb. 10-11
1985	TORONTO	0	0	25	Apr. 23
	HAMILTON	2	0	36	Apr. 23-24
	SUDBURY	0	0	31	Aug. 4
	WINDSOR (12008)	0	0	25	Dec. 20
	WINDSOR (12016)	0	0	30	Dec. 20
	NIAGARA FALLS	0	0	19	Apr. 24
	CONISTON	0	0	19	Mar. 26
	NEW SUDBURY	0	0	31	Jan. 7
	SARNIA	0	0	20	Mar. 27-28
	ST. CATHARINES	0	0	18	Dec. 6
1986	TORONTO	0	0	22	Jan. 17
	HAMILTON	5	0	37	May 15
	SUDBURY	0	0	23	Oct. 26
	WINDSOR (12008)	0	0	31	Jan. 16, Oct. 22 Dec. 16
	WINDSOR (12016)	0	0	29	Mar. 14
	NIAGARA FALLS	0	0	17	Jan. 17
	CONISTON	0	0	18	Mar. 20-21
	NEW SUDBURY	0	0	20	Apr. 23
	SARNIA	0	0	29	Dec. 17
	ST. CATHARINES	0	0	18	Jan. 17
1987	TORONTO	0	0	31	Oct. 16
	HAMILTON	2	0	38	Oct. 17
	SUDBURY	0	0	26	Mar. 14
	WINDSOR (12008)	0	0	24	Apr. 10
	WINDSOR (12016)	0	0	20	Jun. 25, Oct. 24
	NIAGARA FALLS	0	0	16	Oct. 16-17
	CONISTON	0	0	23	Mar. 9, Mar. 11
	NEW SUDBURY	0	0	22	Mar. 11, Mar. 14, Aug. 27
	SARNIA	0	0	24	Jan. 28
	ST. CATHARINES	0	0	24	Oct. 16-17

SECTION C POLLUTANTS MEASURED BY HIGH VOLUME SAMPLER MONITORING (DAILY DATA)

TSP

TOTAL SUSPENDED PARTICULATE

11.1 Characteristics

Total suspended particulate is a generic term for airborne particles including smoke, fume, dust, fly ash and pollen. Composition varies with place and season but normally includes soil particulates, organic matter, sulphur and nitrogen compounds and metals such as lead. Size range is approximately 0.1 to 100 microns (diameter).

11.2 Effects

The greatest impact on health is from particles less than 10 microns in diameter which can penetrate deep into the lungs and contribute to respiratory disease. More serious health effects may be associated with suspended particulate matter which contains a toxic particulate component or which has absorbed a gaseous pollutant on the surface of the particles. Corrosion, soiling, damage to vegetation and visibility reduction are additional effects.

11.3 Ontario Criteria

120 $\mu g/m^3$ (24 hours)
60 $\mu g/m^3$ (one year – geometric mean)

11.4 Sources

Natural sources include wind-blown soil, forest fires, and plant pollen. Anthropogenic sources include combustion, incineration, construction, mining, metals smelting and processing, grinding processes, agricultural activity and transportation.

11.5 Method of Monitoring

- High Volume Sampler

Air is drawn through a filter at the rate of approximately 1.4 m^3/min. The (daily) mass concentration of total suspended particulate matter is computed from the mass of collected particles and the volume of air sampled.

11.6 Location and Frequency of Monitoring

The monitoring locations and the length of the sampling cycle (in days) for each location are indicated in the Appendix (Table A-3).

TSP was measured at 136 locations in 1987.

11.7 Monitoring Results

The distribution by percentile; the maximum; the arithmetic and geometric means are given in the Appendix (Table A-23). Also given are the number of exceedances of the 24-hour and one-year criteria.

The lowest levels measured in the province were at the Hospital in Blind River where the annual mean was 24 $\mu g/m^3$.

The greatest percentage of exceedances of the 24-hour criterion occurred at Thorold and the highest annual mean was measured there also.

There were a total of 111 stations which exceeded the 24-hour criterion and 34 which exceeded the one-year criterion. (See also Table 4).

11.8 Ten-Year Trend

The trend in mean annual TSP at locations which possess a 10-year record is shown in Table A-24 and is summarized for the province in Table 5. Particulate levels have improved since 1978 by about 15%.

Pb

LEAD IN SUSPENDED PARTICULATE

12.1 Characteristics

- A silver-bluish, white, soft metal
- Molecular weight 207.20

12.2 Effects

Can degrade renal function, impair hemoglobin synthesis, and alter the nervous system.

12.3 Ontario Criteria

5.0 $\mu g/m^3$ (24 hours)
2.0 $\mu g/m^3$ (30 day – geometric mean)

12.4 Sources

- Combustion of gasoline containing lead additives/secondary smelting of lead, battery manufacture, metal fabrication
- Some paint and glass manufacture
- Production of iron, steel, copper and nickel

Lead emissions fell significantly after 1975 with the introduction of lead-free gasoline.

12.5 Method of Monitoring

Lead concentration on high volume filters determined by either X-Ray fluorescence or atomic absorption.

12.6 Location and Frequency of Monitoring

The monitoring locations and the length of the sampling cycle (in days) for each location are indicated in the Appendix (Table A-3).

Lead was measured at 74 locations in 1987.

12.7 Monitoring Results

The distribution by percentile; the maximum; the arithmetic and geometric means are given in the Appendix (Table A-25). Also given are the number of exceedances of the 24-hour criterion.

The greatest percentage of exceedances of the 24-hour criterion occurred at Mississauga (2414 Dixie Road) in the vicinity of a lead processing plant. The highest measured value occurred at Mosley and Leslie Street in Toronto near another secondary lead smelter.

There were a total of four stations (all located near secondary lead smelters) which exceeded the daily criterion at least once. (See also Table 4.)

12.8 Ten-Year Trend

Lead levels in air have improved very significantly over the past 10 years (see Table 5).

The trend at selected Ontario cities is shown in Table A-26; the decline is largely due to the decreased use of leaded gasoline.

TRACE METALS

CADMIUM, COBALT, CHROMIUM, COPPER, IRON, MANGANESE, NICKEL, VANADIUM

13.1 Characteristics

Name	Symbol	Properties	Molecular Weight
Cadmium	Cd	silver white, hexagonal	112.41
Cobalt	Co	silver grey, cubic	58.93
Chromium	Cr	steel grey, cubic	52.00
Copper	Cu	red, cubic	63.55
Iron	Fe	silver, cubic	58.85
Manganese	Mn	grey-pink, cubic	54.94
Nickel	Ni	silver, cubic	58.60
Vanadium	V	light grey, cubic	50.94

13.2 Effects

Depth of penetration into the respiratory system (and consequently risk to health) increase as particle size decreases. Of the heavy metals, cadmium, chromium and vanadium probably pose the greatest risk to human health.

13.3 Ontario Criteria

Cadmium	2 $\mu g/m^3$ (24 hours)
Chromium	1.5 $\mu g/m^3$ (24 hours)
Copper	50 $\mu g/m^3$ (24 hours)
Manganese	10 $\mu g/m^3$ (24 hours)
Nickel	2 $\mu g/m^3$ (24 hours)
Vanadium	2 $\mu g/m^3$ (24 hours)

13.4 Sources

See Section 1.4.

13.5 Method of Monitoring

Collection is by High Volume Sampler (see Section 11.5). Following determination of TSP, a portion is cut from the exposed filter and ashed to destroy carbonaceous matter. The ashed sample is then digested in acid, and analyzed by atomic absorption spectrophotometry. The mass concentration of each metal in ambient air is calculated from the mass of each metal in TSP and the volume of air sampled, and expressed in $\mu g/m^3$.

13.6 Location and Frequency of Sampling

The monitoring locations and the length of the sampling cycle (in days) for each location are indicated in the Appendix (Table A-3).

Refer to Table 4 for the total number of stations at which each element was monitored.

13.7 Monitoring Results

The distribution by percentile of the daily data: the maximum; the arithmetic mean; the geometric mean; and the number of exceedances of the daily criterion are provided in the Appendix for copper, iron, manganese, nickel, chromium, cadmium and vanadium. No table is provided for cobalt where a large percentage of the measurements were below the detection limit. However, the maximum monitored levels for all trace metals are shown in Table A-36.

Table 4 provides the highlights of particulate monitoring for 1987. It shows that no exceedances of the air quality criteria for metals (exclusive of lead) occurred in 1987.

13.8 Ten-Year Trend

The trend in mean annual copper and iron is shown in Tables A-28 and A-30, respectively, and is summarized for Ontario in Table 5. Copper has declined by 30% and iron by 20% over the past 10 years.

NO_3^-

NITRATE

14.1 Characteristics

Nitrogen oxide compounds, formed from atmospheric nitrogen and oxygen through high temperature combustion, photochemical reactions or bacterial action, may react with other compounds in the air to form nitrate (NO_3^-) or nitric acid (HNO_3).

14.2 Effects

Nitrate and nitric acid are involved in corrosion of materials, visibility degradation and acidic precipitation. They may also have an adverse effect on human health.

14.3 Ontario Criteria

None

14.4 Sources

Nitrate is primarily a secondary pollutant. Anthropogenic sources of nitrogen oxides or nitrates include all high temperature combustion processes, transportation, and fertilizer production and usage. Natural sources include lightning, biological decomposition and photochemical reactions.

14.5 Method of Monitoring

Nitrates collected on glass fibre filters by a High Volume Sampler are extracted by digestion in distilled water. This extract is reduced to nitrite followed by colorimetric analysis for determination of the mass concentration of atmospheric nitrate.

14.6 Location and Frequency of Monitoring

The monitoring locations and the length of the sampling cycle (in days) for each location are indicated in the Appendix (Table A-3).

Nitrate monitoring was carried out at 62 locations in 1987.

14.7 Monitoring Results

The distribution by percentile; the maximum; the arithmetic mean; and the geometric mean are given in the Appendix (Table A-37). Highlights of monitoring are summarized in Table 4.

The highest annual mean nitrate concentration occurred at Windsor (University Avenue) while the highest concentration for a single day occurred at the Pickering monitor.

14.8 Ten-Year Trend

The trend in mean annual NO_3^- at locations which possess a 10-year record is shown in Table A-38 and is summarized for the province in Table 5.

Since nitrate is primarily the result of medium and long-range transport of air pollution, its variability is largely related to meteorological variability.

SO_4^{2-} SULPHATE

15.1 Characteristics

Sulphur dioxide is oxidized in the atmosphere to eventually form sulphate compounds. Intermediaries in the oxidation process such as HSO_3 and SO_3 rapidly combine with water vapour to form sulfuric acid aerosol. This type of process is dependent on atmospheric conditions.

15.2 Effects

Sulphate compounds have been linked to respiratory irritation and disease, corrosion of materials, reduction of visibility and the formation of acidic precipitation.

15.3 Ontario Criteria

None

15.4 Sources

Sulphate is primarily a secondary pollutant. Anthropogenic sources of sulphur oxides include the burning of fuels containing sulphur (such as coal and oil), the smelting of sulphur-containing ores and the refining of petroleum. Natural sources include bacterial decomposition, volcanoes and forest fires.

15.5 Method of Monitoring

Sulphate collected on glass fibre filters by a High Volume Sampler is extracted by digestion in distilled water. This extract is analyzed colorimetrically and the mass concentration of sulphate is calculated.

15.6 Location and Frequency of Monitoring

The monitoring locations and the length of the sampling cycle (in days) for each location are indicated in the Appendix (Table A-3).

Sulphate monitoring was carried out at 62 locations in 1987.

15.7 Monitoring Results

The distribution by percentile; the maximum; the arithmetic mean; and the geometric mean are given in the Appendix (Table A-39). Highlights of monitoring are summarized in Table 4.

The highest annual mean sulphate concentration was measured at Hamilton (Barton/Wentworth), and the highest concentration for a single day occurred at Windsor (University Avenue).

15.8 Ten-Year Trend

The variability of the annual means for sulphate (see Tables 5 and A-40) may be explained by meteorological variability as in the case of nitrate (Section 14.8).

TABLE 4 – HIGHLIGHTS OF PARTICULATE MONITORING 1987

	TSP	Pb	Cu	Fe	Mn	Ni	NO_3	SO_4
LOWEST GEOM MEAN								
Location	Blind River (71065)	Several	London (15015) S.S. Marie (71042)	Several	Mooretown (14031)	Kitchener (26029) North Bay (75010)	Timmins (72077)	Thunder Bay (63022)
Concentration	24 µg/m³	0.1 µg/m³	0.1 µg/m³	0.1 µg/m³	.009 µg/m³	.003 µg/m³	0.5 µg/m³	2.7 µg/m³
HIGHEST GEOM MEAN								
Location	Thorold (27052)	Mississauga (46041)	Nanticoke (22907)	Hamilton (29011)	Hamilton (29011)	Copper Cliff (77070)	Windsor (12008)	Hamilton (29025)
Concentration	167 µg/m³	2.1 µg/m³	0.80 µg/m³	5.0 µg/m³	.318 µg/m³	.156 µg/m³	5.2 µg/m³	13.0 µg/m³
PERCENTAGE OF SAMPLES ABOVE 24 HRS AQC								
Location	Thorold (27052)	Mississauga (46041)						
Number	71	27	0	N/A	0	0	N/A	N/A
NUMBER OF STATIONS EXCEEDING 24 HR AQC								
Number	111	4	0	N/A	0	0	N/A	N/A
NUMBER OF STATIONS EXCEEDING 1 YR AQC								
Number	34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HIGHEST MEASURED VALUE – 24 HRS								
Location	Hamilton (29119)	Toronto (31058)	Copper Cliff (77070)	Copper Cliff (77070)	Hamilton (29025)	Port Colborne (27047)	Pickering (45001)	Windsor (12008)
Concentration	489 µg/m³	38.7 µg/m³	7.58 µg/m³	53.5 µg/m³	5.29 µg/m³	1.64 µg/m³	33.8 µg/m³	91.9 µg/m³
TOTAL NUMBER OF STATIONS								
Number	136	74	58	64	62	60	62	62

TABLE 5 – TEN-YEAR TREND FOR PARTICULATE POLLUTANTS

POLLUTANT (UNITS)	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	TOTAL NUMBER OF STATIONS
TSP (µg/m³)	56	62	61	53	49	47	48	43	46	47	26
Pb (.1 µg/m³)	4	3	3	3	2	2	2	2	2	1	14
Cu (.01 µg/m³)	24	23	25	19	17	21	18	17	15	17	18
Fe (.1 µg/m³)	13	11	12	8	7	7	7	8	7	10	18
NO_3^- (.1 µg/m³)	32	35	32	31	31	29	29	28	27	27	16
SO_4^{2-} (.1 µg/m³)	81	104	105	91	83	81	82	68	74	85	16

APPENDIX

Air Quality in Ontario 1987

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APPENDIX
AIR QUALITY IN ONTARIO
1987

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INTRODUCTION

This Appendix is intended for use in conjunction with the report *Air Quality in Ontario 1987.*

For each pollutant, tables provide the location of stations and supply sample distribution information including means, maxima and the number of Ontario criteria exceeded.

The entire continuous (hourly) network is summarized in Table A-1 and Maps 1 and 2. The table gives station name, numerical identifier, and pollutants measured. Letter codes indicate whether data are telemetered (T,N,S) or chart-read (C).

Table A-2 gives detailed locations for the continuous monitoring network.

The particulate (daily) network is summarized in Table A-3 and Maps 3 and 4. The table gives station name, numerical identifier, and pollutants measured. Numerals indicate the monitoring cycle frequency in days. Some additional codes are defined in the key at the top of the table.

Table A-4 gives detailed locations for the daily monitoring network. The statistical data and the 10-year trends for the various pollutants are provided in tables A-5 through A-40.

ABBREVIATIONS

INS – insufficient data to compute relevant statistic.
YR – year that monitoring began.

TABLE A-1 THE CONTINUOUS (HOURLY) NETWORK (1987)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, HOURLY DATA

T = TORONTO TELEMETRY N = NEMP TELEMETRY S = SUDBURY TELEMETRY C = CHART READ
D = CALCULATED BY AQUIS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	SO2	COH	CO	O3	NO2	NO	NOX	THC	RHC	TRS	API
HURON PARK	10001	A	77	.	.	.	C	.	.	.	.	.	.	.
WINDSOR- WRIGHT	12007	A	84	T	.	.	.	.	.	.	.	.	C	.
WINDSOR- UNIVERSITY	12008	A	69	T	T	T	T	T	C	D	T	C	.	T
WINDSOR- WYANDOTTE	12013	A	76	C	.	.	.	.	.	.	.	.	C	.
WINDSOR- COLLEGE	12016	A	75	T	T	.	.	.	.	.	.	.	.	T
WINDSOR- HOWARD	12038	I	77	.	C	.	.	.	.	.	.	.	.	.
WINDSOR- DOUGALL	12039	I	78	.	C	.	.	.	.	.	.	.	.	.
WINDSOR- DOUGALL 2	12047	I	84	C	.	.	.	.	.	.	.	.	.	.
WINDSOR- MALDEN	12048	A	84	C	.	.	.	.	.	.	.	.	.	.
WINDSOR- ALEXANDRINE	12049	I	85	.	C	.	.	.	.	.	.	.	.	.
12008- BACKUP	12108	A	73	.	T	.	.	.	.	.	.	.	.	.
12016- BACKUP	12116	A	75	.	T	.	.	.	.	.	.	.	.	.
MERLIN	13021	A	77	.	.	.	C	.	.	.	.	.	.	.
COURTRIGHT- HWY 40	14016	A	69	T	.	.	.	.	.	.	.	.	.	.
SARNIA- CENTENNIAL	14064	A	78	T	T	T	T	T	C	D	T	.	C	T
MANDAUMIN	14118	A	77	.	.	.	C	.	.	.	.	.	.	.
THEDFORD	14119	A	83	.	.	.	C	.	.	.	.	.	.	.
LONDON- FAIR GROUNDS	15001	A	70	T	T	T	T	T	T	D	T	.	.	.
LONGWOODS	15009	A	83	.	C	.	.	.	.	.	.	.	.	.
PARKHILL	15013	A	83	.	.	.	C	C	C	D	.	.	.	.
LONDON	15015	A	86	C	.	.	.	.	.	.	.	.	.	.
LONDON	15016	A	86	C	.	.	.	.	.	.	.	.	.	.
LONDON	15017	A	86	C	.	.	.	.	.	.	.	.	.	.
TIVERTON- CON RD 2	18007	A	79	C	.	.	C	.	.	.	.	.	C	.
SIMCOE	22071	A	75	T	.	.	T	T	T	D	.	T	.	.
NANTICOKE- CHEAPSIDE	22086	I	77	N	.	.	.	N	D	N	.	.	N	.
TOWNSEND	22094	I	84	N	.	.	.	.	.	.	.	.	.	.
LONG POINT	22901	A	79	N	.	.	N	N	D	N	.	.	.	.
NANTICOKE- WALPOLE	22904	I	79	.	.	.	.	.	.	.	.	N	N	.
NANTICOKE- RAINHAM	22907	I	84	N	.	.	.	.	.	.	.	C	N	.
KITCHENER	26029	A	76	C	C	C	C	C	C	D	.	.	.	.
THOROLD- NIAGARA	27042	I	78	C	.	.	.	.	.	.	.	.	.	.
CHIPPAWA- NORTON	27051	I	79	C	.	.	.	.	.	.	.	.	C	.
THOROLD- QUEEN	27052	I	83	C	C	.	.	.	.	.	.	.	C	.
NIAGARA F- STANLEY	27055	I	83	C	C	.	.	.	.	.	.	.	C	.
NIAGARA F- ALLENDALE	27056	A	83	T	T	.	.	.	.	.	.	.	.	T
ST CATHARINES	27067	A	87	T	T	.	.	.	.	.	.	.	.	T
GUELPH- FARQUHAR	28028	A	86	C	C	.	C	.	.	.	.	.	.	.
HAMILTON -WENTWORTH	29000	A	87	T	T	T	T	T	T	D	.	T	T	T
HAMILTON- HUNTER	29001	A	61	.	C	.	.	.	.	.	.	.	.	.

SO_2 sulphur dioxide
SP suspended particles
CO carbon monoxide
O_3 ozone
NO_2 nitrogen dioxide
NO nitric oxide
NO_x total nitrogen oxides
THC total hydrocarbons
RHC reactive (non-methane) hydrocarbons
TRS total reduced sulphur
API air pollution index

TABLE A-1 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, HOURLY DATA

T = TORONTO TELEMETRY N = NEMP TELEMETRY S = SUDBURY TELEMETRY C = CHART READ
D = CALCULATED BY AQUIS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	SO2	COH	CO	O3	NO2	NO	NOX	THC	RHC	TRS	API
HAMILTON- WENTWORTH	29025	I	69	T	T	.	.	.	.	.	.	.	T	T
HAMILTON- BEACH	29102	A	84	T	T	T	.	T	T	D	.	C	T	.
HAMILTON- NASH	29105	A	85	C	C	.	C	.	.	.	.	.	.	.
HAMILTON- VICKERS	29114	A	85	C	C	.	C	.	.	.	.	.	C	.
HAMILTON- MAIN	29118	A	85	C	C	.	C	C	C	D	.	.	.	.
TORONTO- MISSION	31049	A	72	.	C	C	.	C	C	D	.	.	.	.
31104- BACKUP	31103	A	81	T	T	.	.	.	.	.	.	.	.	.
TORONTO- BREADALBANE	31104	A	81	T	T	T	T	T	T	D	T	.	.	T
TORONTO- JUNCTION	31120	A	81	T	T	T	C	T	T	D	T	.	.	.
TORONTO- CN TOWER	31190	A	85	C	.	C	C	C	C	D	.	.	.	.
SCARBORO- LAWRENCE	33003	A	70	T	T	T	T	T	T	D	T	.	.	.
SCARBORO- REDLAND	33019	A	69	C	.	.	.	.	.	.	.	.	.	.
N YORK- SCIENCE CTR	34002	A	69	C	.	C	C	C	C	D	C	.	.	.
ETOBICOKE- ELMCREST	35003	A	69	C	.	C	C	C	C	D	C	.	.	.
ETOBICOKE- QUEENSWAY	35005	A	68	C	.	.	.	.	.	.	.	.	.	.
ETOBICOKE- EVANS	35033	A	67	T	C	T	T	T	T	D	T	.	.	.
ETOBICOKE- MOE LAB	35050	A	76	C	.	.	.	.	.	.	.	.	.	.
BURLINGTON	44008	A	79	C	.	C	C	C	C	D	.	.	.	.
OAKVILLE	44015	A	80	T	C	T	C	T	T	D	C	.	T	.
OSHAWA- RITSON	45025	A	79	T	C	T	T	T	T	D	.	.	.	.
MIS'AUGA- GREEN	46100	A	77	C	.	.	.	.	.	.	.	.	.	.
MIS'AUGA- QUEENSWAY	46110	A	77	C	.	C	C	C	C	D	.	.	.	.
MIS'AUGA- MEADOW PK	46117	A	87	C	.	.	.	.	.	.	.	.	.	.
ALLISTON	47035	A	81	.	.	.	C	.	.	.	.	.	.	.
BARRIE	47042	A	83	C	.	.	.	.	.	.	.	.	.	.
STOUFFVILLE	48002	A	74	C	.	.	C	C	C	D	.	.	.	.
DORSET	49010	A	81	C	.	.	C	D	C	C	.	.	.	.
OTTAWA- MCDONALD GDN	51001	A	71	T	T	T	T	T	T	D	.	.	.	.
CORNWALL- MEMORIAL P	56051	A	70	T	T	T	T	T	T	D	.	.	T	.
CORNWALL- 435 W 2ND	56068	I	75	.	.	.	.	.	.	.	.	.	C	.
SOUTH MOUNTAIN	56071	I	84	.	.	.	.	.	.	.	.	.	C	.
PETERBORO- CITY HALL	59006	A	76	C	.	.	C	.	.	.	.	.	.	.
BALMERTOWN	61014	I	82	C	.	.	.	.	.	.	.	.	.	.
DRYDEN	61027	I	84	.	.	.	.	.	.	.	.	.	C	.
F FRANCES- CHURCH	62030	I	76	.	.	.	.	.	.	.	.	.	C	.
F FRANCES- COLONIZ'N	62032	I	76	.	.	.	.	.	.	.	.	.	C	.
THUNDER B- ALGOMA	63022	A	78	C	.	.	.	.	.	.	.	.	.	.
MARATHON- PENINSULA	63034	I	82	.	.	.	.	.	.	.	.	.	C	.
THUNDER B- MONTREAL	63046	I	76	.	.	.	.	.	.	.	.	.	C	.
RED ROCK	63084	I	81	.	.	.	.	.	.	.	.	.	C	.

TABLE A-1 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, HOURLY DATA

T = TORONTO TELEMETRY N = NEMP TELEMETRY S = SUDBURY TELEMETRY C = CHART READ
D = CALCULATED BY AQUIS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	SO2	COH	CO	O3	NO2	NO	NOX	THC	RHC	TRS	API
TERRACE BAY	63090	I	81	.	.	.	.	.	.	.	.	.	C	.
THUNDER BAY- MTC	63200	A	86	C	C	C	C	C	C	D	.	.	C	.
S.S.MARIE- FARWELL	71068	A	83	S	S	S	S	S	D	S	.	.	S	.
WAWA- HOSPITAL	71069	A	86	S	.	.	.	.	.	.	.	.	.	.
SMOOTH ROCK FALLS	72084	A	86	.	.	.	.	.	.	.	.	.	S	.
HOYLE	72089	I	87	C	.	.	.	.	.	.	.	.	.	.
NORTH BAY	75010	A	79	C	.	.	.	.	.	.	.	.	.	.
SKEAD	77012	A	52	S	.	.	.	.	.	.	.	.	.	.
HANMER	77013	A	65	S	.	.	.	.	.	.	.	.	.	.
SUDBURY- ASH	77016	A	69	T	T	T	T	.	.	.	.	.	.	T
CONISTON- GOVERNMENT	77028	A	74	T	T	.	.	.	.	.	.	.	.	T
GARSON- FALCONBRIDGE	77065	A	76	S	.	.	.	.	.	.	.	.	.	.
NEW SUDBURY- KENNEDY	77075	A	76	T	T	.	.	.	.	.	.	.	.	T
SUDBURY- LONG LAKE	77096	A	80	S	.	.	.	.	.	.	.	.	.	.
MIKKOLA	77201	A	82	S	.	.	.	.	.	.	.	.	.	.
SCIENCE NORTH	77203	A	84	S	S	S	S	S	D	S	.	.	S	.
RAYSIDE- ST LAURENT	77206	A	85	S	.	.	.	.	.	.	.	.	.	.

TABLE A-2 LOCATIONS OF CONTINUOUS (HOURLY) STATIONS (1987)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, HOURLY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
COLLEGE OF AGRIC TECH HURON PARK	10001	77	459200.	4793100.	17	5
WRIGHT/WATER ST WINDSOR	12007	84	327100.	4682300.	17	4
467 UNIVERSITY AV W WINDSOR	12008	69	331600.	4686700.	17	8
FILTRAT PLT, 3665 WYANDOTTE ST E WINDSOR	12013	76	335800.	4687400.	17	6
COLLEGE/SOUTH ST WINDSOR	12016	75	329000.	4684100.	17	4
2885 HOWARD AV WINDSOR	12038	77	334200.	4682600.	17	1
DOUGLAS ST/E.C. ROW W WINDSOR	12039	78	333700.	4682100.	17	5
DORWIN PLAZA, DOUGALL AV WINDSOR	12047	84	332700.	4683400.	17	3
MALDEN RD (S LAURIER DR) WINDSOR	12048	84	329900.	4676600.	17	3
643 ALEXANDRINE WINDSOR	12049	85	334300.	4683200.	17	1
467 UNIVERSITY AV W BKUP WINDSOR	12108	73	328600.	4686700.	17	8
COLLEGE/PRINCE BKUP WINDSOR	12116	75	328900.	4683900.	17	4
MOE WATER PUMP STN, MIDDLE RD MERLIN	13021	77	399100.	4677600.	17	3
HWY 40 (OPP LAMBTON GS) COURTRIGHT	14016	69	379300.	4739700.	17	4
CENTENNIAL PK, FRONT ST/CN TRACKS SARNIA	14064	78	385400.	4759600.	17	3
HWY 25/HWY 26 MANDAUMIN	14118	77	402700.	4756400.	17	5
PUB BLDG THEDFORD	14119	83	430300.	4779800.	17	5
WRN FAIR GROUNDS, KING/RECTORY LONDON	15001	70	481800.	4759500.	17	4
LONGWOODS CONSERVATION AUTHORITY	15009	83	460700.	4747700.	17	2
PUC BLDG PARKHILL	15013	83	444800.	4779300.	17	5
951 COMMISSIONERS RD E LONDON	15015	86	482800.	4756100.	17	4
801 COMMISSIONERS RD E LONDON	15016	86	482000.	4755400.	17	4
8 MOUNTSFIELD DR LONDON	15017	86	480100.	4756100.	17	4
CONCESSION RD 2 LOT A TIVERTON	18007	79	454100.	4905300.	17	4
EXPERIMENTAL FARM SIMCOE	22071	75	559700.	4744900.	17	4
CHEAPSIDE RD (3 KM S OF HWY 3) NANTICOKE	22086	77	582100.	4747200.	17	5
TOWNLINE RD/CON 13 TOWNSEND	22094	86	570000.	4749000.	17	4
PROVINCIAL PARK LONG POINT	22901	79	550200.	4713500.	17	4
WALPOLE S PS, SANDUSK RD NANTICOKE	22904	79	579400.	4743400.	17	4
RAINHAM RD (NEAR STELCO GATE) NANTICOKE	22907	84	575200.	4739800.	17	4
EDNA/FREDERICK STS KITCHENER	26029	76	542700.	4811600.	17	5
NIAGARA FALLS RD/ONTARIO ST THOROLD	27042	78	646900.	4773900.	17	5
HOLY T CHURCH, NORTON/PORTAGE CHIPPAWA	27051	79	658000.	4769400.	17	16
185 QUEEN ST S THOROLD	27052	83	646000.	4774900.	17	1
STP GROUNDS, STANLEY AV NIAGARA FALLS	27055	83	655900.	4776300.	17	4
ALLENDALE AV NIAGARA FALLS	27056	83	655700.	4771800.	17	5
ARGYLE CRESCENT ST.CHATHERINES	27067	87	543500.	4779900.	17	4
EXHIBITION ST/CLARK ST GUELPH	28028	86	559400.	4822100.	17	4
ELGIN/KELLY ST. HAMILTON	29000	87	592400.	4789900.	17	4
HUGHSON/HUNTER HAMILTON	29001	61	591800.	4789400.	17	9

TABLE A-2 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, HOURLY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
BARTON/WENTWORTH HAMILTON	29025	69	593900.	4790000.	17	4
467 BEACH BLVD HAMILTON	29102	84	598900.	4791900.	17	4
NASH RD/KENTLEY DR HAMILTON	29105	85	599800.	4787200.	17	4
VICKERS RD/EAST 18TH ST HAMILTON	29114	85	592300.	4786700.	17	3
MAIN ST/W HWY 403 HAMILTON	29118	85	588700.	4789800.	17	3
MISSION, 381 YONGE ST TORONTO	31049	72	630400.	4835100.	17	4
26 BREADALBANE BKUP TORONTO	31103	81	630200.	4835600.	17	15
26 BREADALBANE API TORONTO	31104	81	630200.	4835600.	17	15
JUNCTION TRIANGLE, PERTH AV TORONTO	31120	81	624800.	4834400.	17	9
CN TOWER, 301 FRONT ST W TORONTO	31190	85	630100.	4833200.	17	444
LAWRENCE/KENNEDY SCARB	33003	70	638900.	4845100.	17	4
MET BRANCH, SCARB BLUFFS SCARBOROUGH	33019	69	642200.	4841100.	17	1
SC CTR, 770 DON MILLS RD NORTH YORK	34002	69	633800.	4841400.	17	17
ELMCREST RD ETOBICOKE	35003	69	613600.	4833800.	17	4
QUEENSWAY HOSPITAL ETOBICOKE	35005	68	615900.	4829300.	17	9
EVANS/ARNOLD AV ETOBICOKE	35033	67	619200.	4830200.	17	3
MOE LAB, RESOURCES RD ETOBICOKE	35050	76	617500.	4840500.	17	18
HWY 2/NORTH SHORE BLVD E BURLINGTON	44008	79	597200.	4796400.	17	17
BRONTE RD/WOBURN CRES OAKVILLE	44015	80	603100.	4805900.	17	5
RITSON RD/OLIVE AV OSHAWA	45025	79	672700.	4861800.	17	5
PUB SCHOOL, GREEN GLADE RD MISSISSAUGA	46100	77	612400.	4818700.	17	11
QUEENSWAY W/HURONTARIO ST MISSISSAUGA	46110	77	612200.	4824900.	17	5
MEADOW PARK APPLE LANE MISSISSAUGA	46117	87	612500.	4818100.	17	5
M OF A, 509 VICTORIA ST E ALLISTON	47035	81	591800.	4889800.	17	4
ARMOURY BLDG PARK/PARKSIDE ST BARRIE	47042	83	503800.	4915700.	17	12
TRAILER/MTC YARD #9, HWY 47 STOUFFVILLE	48002	74	639100.	4869400.	17	5
HWY 117/PAINT LAKE RD DORSET	49010	81	662400.	5009600.	17	3
MCDONALD, RIDEAU/WURTENBURG ST OTTAWA	51001	71	447100.	5031200.	18	4
MEMORIAL PARK, BEDFORD/THIRD STS CORNWALL	56051	70	520800.	4984600.	18	4
SCHOOL, 435 SECOND ST W CORNWALL	56068	75	520500.	4984500.	18	6
BERRYS FEED MILL S MOUNTAIN VILLAGE	56071	84	464700.	4981800.	18	4
CITY HALL, 500 GEORGE ST PETERBOROUGH	59006	76	713700.	4909500.	17	18
SEWAGE TREATMENT PLT BALMERTOWN	61014	82	448200.	5656100.	15	6
35 VAN HORNE AV DRYDEN	61027	84	611600.	5514300.	15	15
PORTAGE/CHURCH ST FORT FRANCES	62030	76	470800.	5383800.	15	4
CEMETERY COLONIZATION RD W FORT FRANCES	62032	76	469700.	5384100.	15	5
HOSPITAL, 35 ALGOMA ST N THUNDER BAY	63022	78	335600.	5367200.	16	22
PENINSULA BLDG MARATHON	63034	82	545300.	5396000.	16	12
CAN-CAR BLDG, MONTREAL ST THUNDER BAY	63046	76	330000.	5358400.	16	3
RECREATION CENTRE RED ROCK	63084	81	408000.	5421600.	16	7

TABLE A-2 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, HOURLY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
ST. MARTIN SCHOOL TERRACE BAY	63090	81	492700.	5403400.	16	8
MTC 615 JAMES ST S THUNDER BAY	63200	86	330300.	5360300.	16	3
FARWELL PUMPHOUSE S.S.MARIE	71068	87	702400.	5156100.	16	4
WAWA MOTOR INN WAWA	71069	86	665000.	5319000.	16	3
ROSS ROAD SMOOTH ROCK FALLS	72084	86	454600.	5458300.	17	4
RR1 LOT 11 CONC 1 MATHESON HOYLE	72089	87	495400.	5376600.	17	3
OPP STN NORTH BAY	75010	79	619700.	5130500.	17	4
SKEAD SUDBURY AIRSHED	77012	52	518600.	5167800.	17	5
HANMER SUDBURY AIRSHED	77013	65	504100.	5166300.	17	5
ASH ST WATER TANK SUDBURY AIRSHED	77016	69	499400.	5148600.	17	3
GOVERNMENT RD/EDWARD ST CONISTON	77028	74	511800.	5148000.	17	5
FALCONBRIDGE RD GARSON SUDBURY DISTRICT	77065	76	510900.	5155900.	17	5
KENNEDY ST NEW SUDBURY	77075	76	504400.	5152000.	17	5
LONG LAKE RD SUDBURY VILLA LOYOLA	77096	80	499200.	5138700.	17	4
MIKKOLA J HAMILTON SCHOOL WALDEN	77201	82	491500.	5140500.	17	5
SCIENCE N SUDBURY	77203	84	500800.	5146100.	17	10
ST LAURENT & REGIONAL RD RAYSIDE	77206	85	492700.	5159900.	17	4

TABLE A-3 THE PARTICULATE (DAILY) NETWORK (1987)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87,DAILY DATA

SINGLE DIGITS = CYCLE DURATION IN DAYS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	TSP	CD	CO	CR	CU	FE	MN	NI	PB	V	NO3	SO4
GODERICH	10015	A	76	6	.	.	.	.	.	.	.	.	.	6	6
ST MARYS	11001	A	78	6	.	.	.	.	.	.	.	.	.	.	.
WINDSOR- CITY HALL	12002	A	69	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR- RIVERSIDE	12005	A	78	6	6	6	6	6	6	6	6	6	6	6	6
LA SALLE	12006	A	83	6	.	.	.	.	.	.	.	.	.	.	.
WINDSOR- WRIGHT	12007	A	84	6	.	.	.	.	6	.	.	6	.	.	.
WINDSOR- UNIVERSITY	12008	A	70	1	1	1	1	1	1	1	1	1	1	1	1
LITTLE RIVER	12009	A	71	6	.	.	.	.	.	.	.	6	.	6	6
WINDSOR- MANNING	12010	A	71	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR- WYANDOTTE	12013	A	71	6	6	6	6	6	6	6	6	6	6	.	.
WINDSOR-PROSPECT	12015	A	71	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR- COLLEGE	12016	A	75	3	.	.	.	.	3	.	.	3	.	.	.
WINDSOR- GEORGE	12036	A	77	6	.	.	.	.	.	.	.	.	.	.	.
WINDSOR- CALIFORNIA	12037	A	77	6	.	.	.	.	.	.	.	.	.	.	.
WINDSOR- HOWARD	12038	I	77	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR- DOUGALL 1	12039	I	78	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR- DOUGALL 2	12047	A	85	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR- ALEXANDRINE	12049	A	85	6	6	6	6	6	6	6	6	6	6	6	6
WINDSOR	12051	A	86	6	6	6	6	6	6	6	6	6	6	6	6
AMHERSTBURG	12053	A	81	6	.	.	.	.	.	.	.	.	.	.	.
CHATHAM	13003	A	69	6	6	6	6	6	6	6	6	6	6	6	6
SARNIA- MITTON	14001	A	69	6	.	.	.	.	.	.	.	.	.	.	.
COURTRIGHT- HWY 40	14016	A	69	1	1	1	1	1	1	1	1	1	1	1	1
CORUNNA- RR1	14030	A	78	6	6	6	6	6	6	6	6	6	6	.	.
MOORETOWN	14031	A	78	6	6	6	6	6	6	6	6	6	6	.	.
SARNIA- POINT EDWARD	14054	A	69	6	.	.	.	.	.	.	.	.	.	.	.
CORUNNA- ST CLAIR	14059	A	75	6	.	.	.	.	.	.	.	.	.	.	.
SARNIA- CENTENNIAL	14064	A	78	6	6	6	6	6	6	6	6	6	6	6	6
SARNIA- DAVID	14151	A	79	6	.	.	.	.	.	.	.	.	.	.	.
SARNIA	14152	I	87	3	.	.	.	3	.	3	.	.	.	.	.
SARNIA	14153	I	87	3	.	.	.	3	.	3	.	.	.	.	.
LONDON- FAIR GROUNDS	15001	A	70	6	6	6	6	6	6	6	6	6	6	6	6
LONDON- DUNDAS	15003	A	70	6	.	.	.	.	.	.	.	6	.	6	6
ST THOMAS- ALEX'DRIA	15006	I	75	6	.	.	.	.	.	.	.	.	.	.	.
ST THOMAS- EDGEWARE	15008	I	81	6	.	.	.	.	.	.	.	6	.	.	.
LONGWOODS	15009	A	83	3	3	3	3	3	3	3	3	3	3	.	.
LONDON	15014	A	86	6	6	.	6	6	6	6	6	6	6	.	.
LONDON	15015	A	86	6	6	.	6	6	6	6	6	6	6	.	.
LONDON	15016	A	86	6	6	.	6	6	6	6	6	6	6	.	.
LONDON	15017	A	86	6	6	.	6	6	6	6	6	6	6	.	.

TSP total suspended particulate
Cd cadmium
C0 cobalt
Cr chromium
Cu copper
Fe iron
Mn manganese
Ni nickel
Pb lead
V vanadium
NO_3 nitrate
SO_4 sulphate

TABLE A-3 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87,DAILY DATA

SINGLE DIGITS = CYCLE DURATION IN DAYS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	TSP	CD	CO	CR	CU	FE	MN	NI	PB	V	NO3	SO4
BEACHVILLE	17006	I	74	6	.	.	.	.	.	.	.	.	.	.	.
INGERSOLL	17020	I	81	6	.	.	.	.	.	.	.	.	.	.	.
EMBRO	17021	I	83	3	.	.	.	.	.	.	.	.	.	.	.
WINGHAM- WATER	17022	I	85	6	.	.	.	.	6	6	.	.	.	.	.
WINGHAM- LEOPOLD	18014	I	85	6	.	.	.	.	6	6	.	.	.	.	.
JARVIS- JAMES	22087	A	80	6	.	.	.	.	.	.	.	.	.	.	.
PORT DOVER	22090	A	83	6	.	.	.	.	.	.	.	.	.	.	.
JARVIS- RAINHAM	22092	I	85	6	.	.	.	.	.	.	.	.	.	.	.
NANTICOKE- WALPOLE	22904	I	79	6	.	.	.	.	.	.	.	6	.	6	6
NANTICOKE- RAINHAM	22907	I	84	6	6	6	6	6	6	6	6	6	6	.	.
NANTICOKE- RD	22961	I	79	6	.	.	.	.	.	.	.	.	.	.	.
NANTICOKE- GS	22964	I	84	6	.	.	.	.	.	.	.	.	.	.	.
JARVIS- HWY 6	22965	I	84	6	.	.	.	.	.	.	.	.	.	.	.
KITCHENER	26029	A	76	6	6	6	6	6	6	6	6	6	6	6	6
WELLAND	27045	I	78	6	.	.	.	.	.	.	.	.	.	.	.
PORT COLBORNE- DAVIS	27047	I	79	6	.	.	.	.	.	.	6	.	.	.	.
NIAGARA F- VICTORIA	27050	I	79	6	.	.	.	.	.	.	.	.	.	.	.
CHIPPAWA- NORTON	27051	I	79	6	.	.	.	.	.	.	.	.	.	.	.
THOROLD- QUEEN	27052	I	82	6	.	.	.	.	.	.	.	.	.	.	.
NIAGARA F- STANLEY	27055	I	82	6	.	.	.	.	.	.	.	.	.	.	.
NIAGARA F- ALLENDALE	27056	A	83	6	.	.	.	.	.	.	.	.	.	6	6
GUELPH- HANLON	28027	I	81	6	.	.	.	.	.	.	.	.	.	.	.
GUELPH- EXHIBITION	28028	A	86	6	.	.	.	.	.	.	.	6	.	6	6
HAMILTON- ELGIN	29000	A	69	6	6	6	6	6	6	6	6	6	6	6	6
HAMILTON- KENILWORTH	29009	A	69	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- BURLINGTON	29011	I	73	6	6	6	6	6	6	6	6	6	6	6	6
HAMILTON- WELLINGTON	29012	A	69	6	6	6	6	6	6	6	6	6	6	6	6
HAMILTON- CHATHAM	29017	A	61	6	6	6	6	6	6	6	6	6	6	6	6
HAMILTON- BARTON	29025	I	69	1	6	6	6	6	6	6	6	6	6	6	6
HAMILTON- HUGHSON	29067	A	73	6	6	6	6	6	6	6	6	6	6	.	.
HAMILTON- CUMBERLAND	29087	A	79	6	.	.	.	.	.	.	.	.	.	6	6
HAMILTON- BARTON	29089	A	80	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- BAY	29098	A	83	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- BEACH	29102	A	85	1	1	1	1	1	1	1	1	1	1	1	1
GREENSVILLE	29111	I	86	3	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- GERTRUDE	29113	A	86	3	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- VICKERS	29114	A	86	3	3	3	3	3	3	3	3	3	3	3	3
HAMILTON- MAIN	29118	A	85	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- MORLEY	29119	A	86	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- DUNBURN	29122	A	87	6	.	.	.	.	.	.	.	.	.	.	.

TABLE A-3 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87,DAILY DATA

SINGLE DIGITS = CYCLE DURATION IN DAYS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	TSP	CD	CO	CR	CU	FE	MN	NI	PB	V	NO3	SO4
HAMILTON- WESTWOODS	29128	A	87	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- EWEN	29130	A	87	6	.	.	.	.	.	.	.	.	.	.	.
HAMILTON- ALBIONS	29135	A	87	6	.	.	.	.	.	.	.	.	.	.	.
TORONTO- BRUCE P.S	31045	I	86	1	1	1	1	1	1	1	1	1	1	.	.
TORONTO- MOSLEY	31058	I	73	1	1	1	1	1	1	1	1	1	1	.	.
TORONTO- HAMILTON	31082	I	74	1	.	.	.	.	.	.	.	1	.	.	.
TORONTO- TECUMSETH	31085	I	79	1	.	.	.	.	.	.	.	1		.	.
TORONTO- BREADALBANE	31104	A	81	1	1	1	1	1	1	1	1	1	1	1	1
TORONTO- JUNCTION	31120	A	81	3	3	3	3	3	3	3	3	3	3	3	3
TORONTO- EASTERN	31126	I	86	1	1	1	1	1	1	1	1	1	1	.	.
TORONTO- BATHURST	31181	I	83	1	.	.	.	.	.	.	.	1	.	.	.
SCARBORO- LAWRENCE	33003	A	70	3	3	3	3	3	3	3	3	3	3	3	3
SCARBORO- REDLAND	33019	A	69	6	.	.	.	.	.	.	.	6	.	6	6
N YORK- SCIENCE CTR	34002	A	70	3	3	3	3	3	3	3	3	3	3	3	3
ETOBICOKE- ELMCREST	35003	A	69	3	3	3	3	3	3	3	3	3	3	3	3
ETOBICOKE- QUEENSWAY	35005	A	69	3	.	.	.	.	.	.	.	.	.	3	3
ETOBICOKE- EVANS	35033	A	69	3	3	3	3	3	3	3	3	3	3	3	3
ETOBICOKE- MOL LAB	35051	A	80	1	.	.	.	.	.	.	.	.	.	.	.
OAKVILLE- SEWAGE PL	44005	I	69	1	.	.	.	.	.	.	.	.	.	.	.
BURLINGTON	44008	A	79	3	3	3	3	3	3	3	3	3	3	3	3
OAKVILLE	44015	I	80	3	3	3	3	3	3	3	3	3	3	3	3
PICKERING- FIRE HALL	45001	I	70	1	1	1	1	1	1	1	1	1	1	1	1
OSHAWA- RITSON	45025	A	79	3	.	.	.	.	.	.	.	3	.	3	3
BRAMALEA	46033	A	69	6	6	6	6	6	6	6	6	6	6	6	6
MIS'AUGA- 2414 DIXIE	46041	I	72	1	.	.	.	.	.	.	.	1	.	.	.
MIS'AUGA- 2365 DIXIE	46045	I	73	1	.	.	.	.	.	.	.	1	.	.	.
MIS'AUGA- 2360 DIXIE	46046	I	73	1	.	.	.	.	.	.	.	1	.	.	.
MIS'AUGA- QUEENSWAY	46110	A	78	3	.	.	.	.	.	.	.	3	.	3	3
ORILLIA	47019	A	77	6	.	.	.	.	.	.	.	.	.	6	6
BARRIE	47042	A	82	3	3	3	3	3	3	3	3	3	3	3	3
STOUFFVILLE	48002	A	80	3	.	.	.	.	.	.	.	.	.	3	3
PETERBORO- CITY HALL	59006	A	77	3	3	3	3	3	3	3	3	3	3	3	3
ATIKOKAN	62013	A	76	6	.	.	.	.	.	.	.	.	.	.	.
F FRANCES- CHURCH	62030	I	72	6	.	.	.	.	.	.	.	.	.	.	.
F FRANCES- COLONIZ'N	62032	I	76	6	.	.	.	.	.	.	.	.	.	.	.
THUNDER B- ARCHIBALD	63005	A	70	6	6	6	6	6	6	6	6	6	6	6	6
THUNDER B- DAWSON	63012	A	70	6	.	.	.	.	.	.	.	.	.	.	.
THUNDER B- ALGOMA	63022	A	69	6	6	6	6	6	6	6	6	6	6	6	6
THUNDER B- MONTREAL	63046	I	78	6	.	.	.	.	.	.	.	.	.	.	.
THUNDER B- WILLIAM	63052	A	80	6	.	.	.	.	.	.	.	.	.	.	.

TABLE A-3 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87,DAILY DATA

SINGLE DIGITS = CYCLE DURATION IN DAYS TYP = A:AMBIENT SURVEY; I:SOURCE SPECIFIC SURVEY

STATION NAME	ID	TYP	YR	TSP	CD	CO	CR	CU	FE	MN	NI	PB	V	NO3	SO4
THUNDER B- JAMES ST	63200	A	86	6	.	.	.	.	.	.	.	6	.	6	6
S.S.MARIE- BONNEY	71042	I	75	6	6	6	6	6	6	6	6	6	6	6	6
S.S.MARIE- QUEEN	71049	A	75	6	6	6	6	6	6	6	6	6	6	6	6
BLIND RIVER	71065	A	82	6	.	.	.	.	.	.	.	.	.	.	.
S.S.MARIE-MM.S	71068	A	87	6	6	6	6	6	6	6	6	6	6	6	6
S.S.MARIE	71071	I	86	6	6	6	6	6	6	6	6	6	6	.	.
S.S.MARIE	71072	I	86	6	6	6	6	6	6	6	6	6	6	.	.
TIMMINS	72077	I	84	6	6	6	6	6	6	6	6	6	6	6	6
NORTH BAY	75010	A	79	6	6	6	6	6	6	6	6	6	6	6	6
NORTH BAY- HWY 17	75032	I	86	6	.	.	.	.	.	.	.	.	.	.	.
SUDBURY- ASH	77016	A	69	6	6	6	6	6	6	6	6	6	6	6	6
SUDBURY- LISGAR	77026	A	72	6	6	6	6	6	6	6	6	6	6	6	6
ESPANOLA- SPRUCE	77029	A	77	6	.	.	.	.	.	.	.	.	.	.	.
COPPER CLIFF	77070	I	76	6	6	6	6	6	6	.	6	6	6	6	6
ESPANOLA	77214	I	87	1	.	.	.	.	.	.	.	.	.	.	.
ESPANOLA	77215	I	87	2	.	.	.	.	.	.	.	.	.	.	.

TABLE A-4 LOCATIONS OF PARTICULATE (DAILY) STATIONS (1987)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, DAILY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
PUC BLDG, WEST ST GODERICH	10015	76	442500.	4843400.	17	6
309 THOMAS ST ST MARYS	11001	78	487900.	4788400.	17	30
CITY HALL, 444 WINDSOR AV WINDSOR	12002	69	332300.	4686700.	17	15
7730 RIVERSIDE DR E WINDSOR	12005	78	339500.	4689000.	17	10
BEACH LANE/HWY 18 LA SALLE	12006	83	326400.	4677800.	17	4
WRIGHT/WATER ST WINDSOR	12007	84	327100.	4682300.	17	4
467 UNIVERSITY AV W WINDSOR	12008	70	331600.	4686700.	17	8
9725 RIVERSIDE DR E LITTLE RIVER	12009	71	341300.	4688800.	17	2
SEWAGE STN, MANNING RD WINDSOR	12010	71	346000.	4687500.	17	1
FILTRAT PLT, 3665 WYANDOTTE ST E WINDSOR	12013	71	335800.	4687400.	17	6
SEWAGE STN, HWY 18/PROSPECT WINDSOR	12015	71	328300.	4683300.	17	5
COLLEGE/SOUTH ST WINDSOR	12016	75	329000.	4684100.	17	4
1802 GEORGE AV WINDSOR	12036	77	336700.	4685800.	17	5
3225 CALIFORNIA ST WINDSOR	12037	77	332700.	4681600.	17	4
2885 HOWARD AV WINDSOR	12038	77	334200.	4682600.	17	1
DOUGALL/E.C. ROW W WINDSOR	12039	78	333700.	4682100.	17	5
DORWIN PLAZA, DOUGALL AV WINDSOR	12047	85	332700.	4683400.	17	3
643 ALEXANDRINE WINDSOR	12049	85	334300.	4683200.	17	1
604 CAPITOL/REMINGTON WINDSOR	12051	86	334400.	4682800.	17	1
415 FRONT ST AMHERSTBURG	12053	81	325300.	4665700.	17	14
POST OFFICE, 10 CENTRE ST CHATHAM	13003	69	402400.	4695200.	17	12
GENERAL HOSPITAL, 220 MITTON ST SARNIA	14001	69	386000.	4758700.	17	15
HWY 40 (OPP LAMBTON GS) COURTRIGHT	14016	69	379300.	4739700.	17	4
RR1 (W OF HOUSE) CORUNNA	14030	78	394900.	4748600.	17	1
RR1 (W OF BARN) MOORETOWN	14031	78	393800.	4746100.	17	1
SARNIA YACHT CLUB, POINT EDWARD SARNIA	14054	69	384600.	4761700.	17	5
ST CLAIR BLVD/HWY 40 CORUNNA	14059	75	381300.	4748100.	17	4
CENTENNIAL PK, FRONT ST/CN TRACKS SARNIA	14064	78	385400.	4759600.	17	3
DAVID/FRONT ST SARNIA	14151	79	385200.	4758800.	17	4
CHRISTINA/EXMOUTH ST SARNIA	14152	87	385700.	4759800.	17	5
704 MARA ST. POINT EDWARD-SARNIA	14153	87	385600.	4760300.	17	9
MRN FAIR GROUNDS, KING/RECTORY LONDON	15001	70	481800.	4759500.	17	4
362 DUNDAS ST LONDON	15003	70	480100.	4759000.	17	17
16 ALEXANDRIA ST ST THOMAS	15006	75	485600.	4736100.	17	6
EDGEWARE RD (NNW VARTA PLT) ST THOMAS	15008	81	487600.	4737900.	17	2
LONGWOODS CONSERVATION AUTHORITY	15009	83	460700.	4747700.	17	2
POND MILLS RD/DEVERON CRES LONDON	15014	86	483600.	4756300.	17	4
951 COMMISSIONER'S RD E LONDON	15015	86	482800.	4756100.	17	4
801 COMMISSIONER'S RD E LONDON	15016	86	482000.	4755400.	17	4
8 MOUNTSFIELD DR LONDON	15017	86	480100.	4756100.	17	4

TABLE A-4 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, DAILY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
ST ANTHONY'S SS, HWY 2 BEACHVILLE	17006	74	513200.	4769600.	17	6
HWY 2 RR 2 (J SPRIEL PROP) INGERSOLL	17020	81	511800.	4767500.	17	2
OXFORD CTY RD 6 (HESSTON FARM) EMBRO	17021	83	510200.	4772200.	17	1
182 WATER ST WINGHAM	17022	85	474700.	4856100.	17	1
369 LEOPOLD ST WINGHAM	18014	85	474700.	4849600.	17	1
JARVIS COMMUNITY CENTRE, JAMES ST JARVIS	22087	80	572400.	4748100.	17	4
ST GEORGE/ALMA PORT DOVER	22090	83	564300.	4737700.	17	5
RAINHAM RD/SANDUSK RD JARVIS	22092	85	579100.	4740700.	17	4
WALPOLE S PS, SANDUSK RD NANTICOKE	22904	79	579400.	4743400.	17	4
RAINHAM RD (NEAR STELCO GATE) NANTICOKE	22907	84	575200.	4739800.	17	4
NANTICOKE RD/WALPOLE CON 2 NANTICOKE	22961	79	575800.	4741200.	17	3
N 2 KM NANTICOKE GS NANTICOKE	22964	84	574500.	4742000.	17	4
HWY 6/NORFOLK CON 2 JARVIS	22965	84	569800.	4741300.	17	2
EDNA/FREDERICK STS KITCHENER	26029	76	542700.	4811600.	17	5
337 ALBERTA/DEVON ST WELLAND	27045	78	643300.	4758700.	17	1
DAVIS/FRAZER PORT COLBORNE	27047	79	643500.	4749700.	17	3
4057 VICTORIA AV NIAGARA FALLS	27050	79	656700.	4775200.	17	4
HOLY T CHURCH, NORTON/PORTAGE CHIPPAWA	27051	79	658000.	4769400.	17	16
185 QUEEN ST S THOROLD	27052	82	646000.	4774900.	17	1
STP GROUNDS, STANLEY AV NIAGARA FALLS	27055	82	655900.	4776300.	17	4
ALLENDALE AV NIAGARA FALLS	27056	83	655700.	4771800.	17	5
HANLON EXPT/SPEED RIVER GUELPH	28027	81	559400.	4819000.	17	6
EXHIBITION/CLARK ST GUELPH	28028	86	559400.	4822100.	17	4
HUGHSON/HUNTER HAMILTON	29001	69	591800.	4789400.	17	9
KENILWORTH HAMILTON	29009	69	596700.	4788400.	17	6
BURLINGTON/LEEDS HAMILTON	29011	61	595400.	4790500.	17	5
BURLINGTON/WELLINGTON HAMILTON	29012	66	593100.	4791400.	17	7
CHATHAM/FRID HAMILTON	29017	61	589800.	4789600.	17	6
BARTON/WENTWORTH HAMILTON	29025	69	593900.	4790000.	17	4
450 HUGHSON ST N HAMILTON	29067	73	592500.	4791300.	17	5
405 CUMBERLAND AV HAMILTON	29087	79	594600.	4788200.	17	4
BARTON/NASH RD HAMILTON	29089	80	600000.	4787900.	17	6
BAY/MAIN ST HAMILTON	29098	83	591300.	4789600.	17	23
467 BEACH BLVD HAMILTON	29102	85	598900.	4791900.	17	4
OFIELD RD/HWY 5 GREENSVILLE	29111	86	582700.	4793500.	17	1
GERTRUDE/DEPEW HAMILTON	29113	86	595900.	4789900.	17	4
VICKERS RD/EAST 18TH ST HAMILTON	29114	86	592300.	4786700.	17	3
MAIN ST/W HWY 403 HAMILTON	29118	85	588700.	4789800.	17	3
MORLEY ST/PARKDALE AV HAMILTON	29119	86	598700.	4789100.	17	4
DUNDURN/YORK HAMILTON	29122	87	590500.	4791100.	17	10

TABLE A-4 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, DAILY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
LYNBROOK DR/ROLSTON HAMILTON	29128	87	589900.	4786500.	17	5
EWEN RD/WHITNEY AV HAMILTON	29130	87	586800.	4789300.	17	1
ALBRIGHT RD./MT.ALBION RD HAMILTON	29135	87	597900.	4785700.	17	8
BRUCE P.S 51 LARCHMOUNT AV TORONTO	31045	86	634300.	4835400.	17	21
MOSLEY/LESLIE STS TORONTO	31058	73	634600.	4835300.	17	5
WORKS DEPT, 138 HAMILTON AV TORONTO	31082	74	632800.	4835500.	17	5
TECUMSETH/NIAGARA ST TORONTO	31085	79	628700.	4833000.	17	6
26 BREADALBANE API TORONTO	31104	81	630200.	4835600.	17	15
JUNCTION TRIANGLE, PERTH AV TORONTO	31120	81	624800.	4834400.	17	9
969 EASTERN AV TORONTO	31126	86	635200.	4835500.	17	11
60 BATHURST ST TORONTO	31181	83	628800.	4833200.	17	6
LAWRENCE/KENNEDY SCARBOROUGH	33003	70	638900.	4845100.	17	4
MET BRANCH, SCARB BLUFFS SCARBOROUGH	33019	69	642200.	4841100.	17	1
CTR 770 DON MILLS RD NORTH YORK	34002	70	633800.	4841400.	17	17
ELMCREST RD ETOBICOKE	35003	69	613600.	4833800.	17	4
QUEENSWAY HOSPITAL ETOBICOKE	35005	69	615900.	4829300.	17	9
EVANS/ARNOLD AV ETOBICOKE	35033	69	619200.	4830200.	17	3
RADIATION LABS, RESOURCES RD TORONTO	35051	80	617200.	4840300.	17	11
2487 LAKESHORE E/BIRKBANK RDS OAKVILLE	44005	69	610600.	4815000.	17	2
HWY 2/NORTH SHORE BLVD E BURLINGTON	44008	79	597200.	4796400.	17	17
BRONTE RD/WOBURN CRES OAKVILLE	44015	80	603100.	4805900.	17	5
PICKERING FIRE HALL PICKERING	45001	70	655100.	4854800.	17	1
RITSON RD/OLIVE AV OSHAWA	45025	79	672700.	4861800.	17	5
BRAMALEA FIRE HALL BRAMALEA	46033	69	605300.	4839800.	17	3
2414 DIXIE RD MISSISSAUGA	46041	72	614700.	4828700.	17	5
2365 DIXIE RD MISSISSAUGA	46045	73	614800.	4828800.	17	5
2360 DIXIE RD MISSISSAUGA	46046	73	614700.	4828600.	17	12
QUEENSWAY W/HURONTARIO ST MISSISSAUGA	46110	78	612200.	4824900.	17	5
POST OFFICE, 17-25 PETER ST S ORILLIA	47019	77	625500.	4940600.	17	10
ARMOURY BLDG PARK/PARKSIDE ST BARRIE	47042	82	603800.	4915700.	17	12
TRAILER/MTC YARD #9, HWY47 STOUFFVILLE	48002	80	639100.	4869400.	17	5
CITY HALL, 500 GEORGE ST PETERBOROUGH	59006	77	713700.	4909500.	17	18
WEATHER STN ATIKOKAN	62013	76	603000.	5400800.	15	1
PORTAGE/CHURCH ST FORT FRANCES	62030	76	470800.	5383800.	15	4
CEMETERY COLONIZATION RD W FORT FRANCES	62032	76	469700.	5384100.	15	5
HOSP ARCHIBALD/ARTHUR STS THUNDER BAY	63005	70	333500.	5360800.	16	29
DAWSON CT ALGOMA ST N THUNDER BAY	63012	70	337200.	5368600.	16	9
HOSPITAL, 35 ALGOMA ST N THUNDER BAY	63022	69	335600.	5367200.	16	22
CAN-CAR BLDG, MONTREAL ST THUNDER BAY	63046	78	330000.	5358400.	16	3
TRNSIT MAINT BD, WILLIAM RD THUNDER BAY	63052	80	334500.	5364700.	16	9

TABLE A-4 (Cont.)

ONTARIO AIR MONITORING NETWORK AS OF 31-DEC-87, DAILY DATA

LOCATION	ID	YR	UTM-X	UTM-Y	ZONE	ELEV (M)
MTC 615 JAMES ST.S THUNDER BAY	63200	86	330300.	5360300.	16	3
PUMPHOUSE, BONNEY ST S.S.MARIE	71042	75	701100.	5155500.	16	1
LAND RDG OFFICE, QUEEN ST S.S.MARIE	71049	75	704700.	5154300.	16	6
ST JOSEPHS HOSPITAL BLIND RIVER	71065	82	348800.	5116000.	17	12
WM.MERRIFIELD SCHOOL S.S.MARIE	71068	87	702900.	5156200.	17	3
BOUNDRY RD./BENNET S.S.MARIE	71071	87	709500.	5154200.	17	2
FIRST AVE/SECOND LINE S.S.MARIE	71072	86	701600.	5156800.	17	2
MINISTRY OF HEALTH BLDG TIMMINS	72077	84	475500.	5368500.	17	5
OPP STN NORTH BAY	75010	79	619700.	5130500.	17	4
N.C. GAS PUMP STATION,HWY 117 NORTH BAY	75032	86	615500.	5131900.	17	2
ASH ST WATER TANK SUDBURY	77016	69	499400.	5148600.	17	3
19 LISGAR ST SUDBURY	77026	72	500600.	5148500.	17	14
POST OFFICE, SPRUCE/BARBER ST ESPANOLA	77029	77	440500.	5123500.	17	6
PUMP HOUSE, NICKEL ST COPPER CLIFF	77070	76	495000.	5146200.	17	5
EXECOTEL HOTEL ESPANOLA	77214	87	440900.	5123700.	17	2
EXECOTEL HOTEL ESPANOLA	77215	87	440900.	5123700.	17	2

TABLE A-5 SULPHUR DIOXIDE (SO_2) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SULPHUR DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR	1YR
12007	WRIGHT/WATER ST WINDSOR	336	.000	.000	.000	.006	.016	.041	.007	0.13	0.03	0	0	0
12008	467 UNIVERSITY AV W WINDSOR	338	.000	.000	.000	.006	.018	.044	.008	0.11	0.03	0	0	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	310	.000	.000	.000	.005	.011	.034	.006	0.13	0.02	0	0	0
12016	COLLEGE/SOUTH ST WINDSOR	344	.000	.000	.000	.001	.013	.039	.005	0.11	0.03	0	0	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	346	.000	.000	.000	.006	.015	.040	.007	0.18	0.03	0	0	0
12048	MALDEN RD (S LAURIER DR) WINDSOR	352	.000	.000	.000	.000	.008	.028	.004	0.09	0.02	0	0	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	330	.000	.000	.000	.000	.007	.059	.004	0.38	0.07	3	0	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	350	.000	.000	.000	.000	.015	.079	.007	0.20	0.05	0	0	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	359	.000	.000	.000	.000	.007	.020	.003	0.08	0.02	0	0	0
15015	951 COMMISSIONERS RD E LONDON	343	.000	.000	.000	.000	.002	.016	.001	0.05	0.01	0	0	0
15016	801 COMMISSIONERS RD E LONDON	353	.000	.000	.000	.000	.008	.019	.004	0.07	0.02	0	0	0
15017	8 MOUNTSFIELD DR LONDON	361	.000	.000	.000	.000	.001	.013	.001	0.06	0.01	0	0	0
18007	CONCESSION RD 2 LOT A TIVERTON	336	.000	.000	.000	.000	.000	.011	.001	0.04	0.02	0	0	0
22071	EXPERIMENTAL FARM SIMCOE	271	.000	.000	.000	.000	.007	.028	.003	0.10	0.02	0	0	0
22086	CHEAPSIDE RD(3 KM S OF HWY 3) NANTICOKE	271	.000	.000	.000	.000	.002	.029	.002	0.24	0.04	0	0	0

TABLE A-5 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SULPHUR DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR	1YR
22094	TOWNLINE RD/CON 13 TOWNSEND	268	.000	.000	.000	.000	.004	.018	.002	0.19	0.03	0	0	0
22901	PROVINCIAL PARK LONG POINT	276	.000	.000	.000	.000	.004	.023	.002	0.17	0.02	0	0	0
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	274	.000	.000	.000	.000	.007	.025	.003	0.14	0.04	0	0	0
26029	EDNA/FREDERICK STS KITCHENER	318	.000	.000	.000	.001	.008	.024	.004	0.06	0.02	0	0	0
27042	NIAGARA FALLS RD/ONTARIO ST THOROLD	314	.000	.000	.000	.000	.000	.086	.005	0.70	0.09	9	0	0
27051	HOLY T CHURCH, NORTON/PORTAGE CHIPPAWA	356	.000	.000	.000	.004	.009	.029	.005	0.06	0.04	0	0	0
27052	185 QUEEN ST S THOROLD	294	.000	.000	.000	.000	.016	.138	.008	0.30	0.10	5	0	0
27055	STP GROUNDS, STANLEY AV NIAGARA FALLS	254	.000	.000	.000	.002	.013	.046	.006	0.11	0.04	0	0	0
27056	ALLENDALE AV NIAGARA FALLS	347	.000	.000	.000	.000	.005	.027	.002	0.14	0.03	0	0	0
27067	ARGYLE CRES (PUMP STN) ST CATHARINES	143	.000	.000	.004	.008	.017	.040	.010	0.14	0.04	0	0	INS
28028	EXHIBITION ST/CLARK ST GUELPH	332	.000	.000	.000	.001	.008	.021	.004	0.06	0.03	0	0	0
29000	ELGIN/KELLY ST HAMILTON	323	.000	.000	.001	.007	.018	.052	.009	0.24	0.06	0	0	0
29025	BARTON/WENTWORTH HAMILTON	340	.000	.000	.000	.004	.019	.052	.007	0.15	0.04	0	0	0
29102	467 BEACH BLVD HAMILTON	350	.000	.000	.000	.005	.024	.065	.009	0.17	0.05	0	0	0
29105	NASH RD/KENTLEY DR HAMILTON	352	.000	.000	.000	.003	.009	.028	.005	0.14	0.03	0	0	0

TABLE A-5 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SULPHUR DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR	1YR
29114	VICKERS RD/EAST 18TH ST HAMILTON	365	.000	.000	.000	.006	.016	.041	.008	0.36	0.06	1	0	0
29118	MAIN ST W/HWY 403 HAMILTON	323	.000	.000	.000	.004	.010	.028	.005	0.19	0.03	0	0	0
31103	26 BREADALBANE BKUP TORONTO	347	.000	.000	.000	.000	.009	.044	.004	0.13	0.04	0	0	0
31104	26 BREADALBANE TORONTO	344	.000	.000	.000	.000	.009	.043	.004	0.13	0.04	0	0	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	341	.000	.000	.000	.000	.009	.030	.004	0.09	0.03	0	0	0
31190	CN TOWER, 301 FRONT ST W TORONTO	262	.000	.000	.000	.005	.012	.052	.007	0.36	0.05	4	0	0
33003	LAWRENCE/KENNEDY SCARBORO	344	.000	.000	.000	.000	.008	.028	.004	0.12	0.03	0	0	0
33019	REDLAND CR (SCARB BLUFFS) SCARBORO	316	.000	.000	.000	.000	.004	.018	.002	0.07	0.03	0	0	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	337	.000	.000	.000	.000	.006	.017	.002	0.06	0.02	0	0	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	353	.000	.000	.000	.002	.009	.031	.005	0.25	0.04	0	0	0
35005	QUEENSWAY HOSPITAL ETOBICOKE	337	.000	.000	.000	.000	.008	.028	.004	0.13	0.02	0	0	0
35033	EVANS/ARNOLD AV ETOBICOKE	323	.000	.000	.000	.002	.009	.027	.005	0.14	0.03	0	0	0
35050	125 RESOURCES RD (MOE LAB) ETOBICOKE	324	.000	.000	.000	.000	.000	.014	.001	0.08	0.01	0	0	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	347	.000	.000	.000	.001	.008	.024	.004	0.21	0.05	0	0	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	334	.000	.000	.000	.000	.008	.030	.003	0.18	0.03	0	0	0

TABLE A-5 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SULPHUR DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR	1YR
45025	PS, RITSON RD/OLIVE AV OSHAWA	311	.000	.000	.000	.000	.008	.028	.004	0.09	0.03	0	0	0
46100	PUB SCHOOL, GREEN GLADE RD MISSISSAUGA	210	.000	.000	.000	.004	.009	.020	.005	0.06	0.02	0	0	INS
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	346	.000	.000	.003	.007	.013	.037	.009	0.22	0.05	0	0	0
46117	MEADOW PK, APPLE LANE CLUB MISSISSAUGA	137	.000	.000	.000	.000	.008	.028	.004	0.08	0.02	0	0	INS
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	350	.000	.000	.000	.000	.003	.018	.002	0.05	0.02	0	0	0
48002	HWY47/E OF HWY48 STOUFFVILLE	359	.000	.000	.000	.000	.004	.017	.002	0.06	0.02	0	0	0
49010	HWY 117/PAINT LAKE RD DORSET	353	.000	.000	.000	.000	.000	.009	.001	0.06	0.01	0	0	0
51001	MCD GDS, RIDEAU/WURTEMBURG ST OTTAWA	335	.000	.000	.000	.000	.000	.014	.001	0.09	0.02	0	0	0
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	350	.000	.000	.000	.000	.014	.057	.006	0.25	0.05	0	0	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	359	.000	.000	.000	.000	.005	.015	.002	0.04	0.02	0	0	0
61014	SEWAGE TREATMENT PLT BALMERTOWN	332	.000	.000	.000	.000	.000	.262	.009	0.95	0.26	87	7	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	365	.000	.000	.000	.000	.000	.014	.000	0.09	0.02	0	0	0
63200	MTC 615 JAMES ST S THUNDER BAY	351	.000	.000	.000	.000	.000	.005	.000	0.06	0.01	0	0	0
71068	MM. MERRIFIELD SCHOOL SAULT STE MARIE	313	.000	.000	.000	.002	.011	.043	.006	0.25	0.04	0	0	0
71069	LADY DUNN HOSPITAL WAWA	356	.000	.000	.000	.000	.004	.149	.006	1.18	0.11	38	1	0

TABLE A-5 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SULPHUR DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR	1YR
72089	RR 1 LOT 11 CONC 1 MATHESON TWP HOYLE	212	.000	.000	.000	.000	.008	.123	.006	0.39	0.09	9	0	INS
75010	OPP STN NORTH BAY	343	.000	.000	.000	.000	.003	.018	.002	0.09	0.02	0	0	0
77012	SKEAD	336	.000	.000	.000	.000	.020	.159	.010	0.81	0.10	29	0	0
77013	HANMER	361	.000	.000	.000	.000	.009	.119	.006	0.72	0.09	13	0	0
77016	WATER TANK, ASH ST SUDBURY	358	.000	.000	.000	.000	.018	.121	.009	0.98	0.09	19	0	0
77028	GOVERNMENT RD/EDWARD ST CONISTON	364	.000	.000	.000	.000	.010	.139	.008	0.51	0.09	24	0	0
77065	FALCONBRIDGE RD GARSON	362	.000	.000	.000	.000	.014	.152	.008	0.61	0.11	24	1	0
77075	KENNEDY ST NEW SUDBURY	351	.000	.000	.000	.000	.015	.165	.009	0.80	0.09	34	0	0
77096	LONG LAKE RD (VILLA LOYOLA) SUDBURY	359	.000	.000	.000	.000	.013	.136	.009	0.98	0.27	36	3	0
77201	MIKKOLA (J HAMILTON SCHOOL) WALDEN	324	.000	.000	.000	.000	.014	.159	.009	0.65	0.15	32	3	0
77203	SCIENCE NORTH SUDBURY	360	.000	.000	.000	.000	.013	.111	.008	0.70	0.09	12	0	0
77206	ST LAURENT/REGIONAL RD RAYSIDE	363	.000	.000	.000	.000	.006	.063	.004	0.60	0.06	18	0	0

TABLE A-6 10-YEAR TREND FOR SO_2

Annual Mean (ppm)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
BURLINGTON	.011	.008	.005	.007	.005	.005	.005	.004	.004	.004
CORNWALL	.017	.013	.012	.010	.010	.008	.009	.009	.008	.006
ETOBICOKE	.010	.010	.008	.008	.006	.006	.007	.007	.005	.005
HAMILTON	.016	.017	.013	.010	.014	.014	.015	.009	.008	.007
KITCHENER	.005	.006	.005	.003	.003	.002	.003	.002	.003	.004
LONDON	.009	.007	.005	.009	.004	.003	.004	.002	.003	.003
NIAGARA FALLS	.008	.011	.007	.004	.003	.003	.004	.003	.003	.002
NORTH BAY	.004	.003	.004	.002	.003	.002	.003	.002	.002	.002
NORTH YORK	.008	.009	.010	.010	.012	.006	.009	.008	.005	.002
OAKVILLE	.009	.009	.007	.005	.007	.005	.007	.006	.005	.003
OSHAWA	-	.010	.007	.004	.004	.003	.005	.003	.003	.004
OTTAWA	.013	.006	004	.005	.004	.002	.002	.002	.002	.001
PETERBORO	.004	.003	.004	.003	.003	.002	.003	.002	.002	.002
SARNIA	.016	.017	.013	.014	.012	.010	.009	.011	.008	.007
SCARBORO	.006	.005	.008	.007	.004	.003	.004	.003	.003	.004
SIMCOE	.007	.009	.007	.004	.004	.003	.004	.005	.003	.003
ST CATHARINES	.007	.007	.004	.007	.005	.005	.005	.006	.005	-
SUDBURY	.012	.012	.016	.010	.010	.009	.010	.010	.008	.009
THUNDER BAY	.001	.001	.001	.001	.000	.000	.000	.000	.000	.000
TORONTO	.011	.008	.007	.008	.006	.004	.006	.004	.004	.004
WINDSOR	.018	.013	.011	.012	.009	.008	.007	.007	.008	.008

TABLE A-7 SUSPENDED PARTICLES (SP) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SUSPENDED PARTICLES UNIT = COHS/1000 FT RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 24HR	1YR
12008	467 UNIVERSITY AV W WINDSOR	350	0.00	0.16	0.26	0.40	0.70	1.34	0.37	3.2	1.1	1	0
12016	COLLEGE/SOUTH ST WINDSOR	339	0.01	0.16	0.25	0.37	0.66	1.33	0.3	3.6	1.0	0	0
12038	2885 HOWARD AV WINDSOR	313	0.10	0.24	0.38	0.56	0.91	1.70	0.51	4.7	1.2	6	1
12039	DOUGLAS ST/E.C. ROW W WINDSOR	320	0.08	0.21	0.35	0.53	0.89	1.83	0.49	4.5	1.8	7	0
12049	643 ALEXANDRINE WINDSOR	282	0.07	0.19	0.31	0.45	0.76	1.53	0.43	3.6	1.1	1	0
12108	467 UNIV AV W BKUP WINDSOR	350	0.00	0.17	0.29	0.44	0.75	1.44	0.40	3.1	1.1	1	0
12116	COLLEGE/PRINCE BKUP WINDSOR	339	0.07	0.19	0.28	0.40	0.72	1.39	0.40	3.7	1.1	1	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	305	0.00	0.10	0.20	0.31	0.56	1.11	0.29	3.1	1.1	1	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	322	0.00	0.06	0.18	0.29	0.51	1.20	0.27	2.5	1.0	0	0
15009	LONGWOODS CONSERVATION AUTHORITY	299	0.00	0.03	0.09	0.17	0.31	0.54	0.17	1.4	0.5	0	0
26029	EDNA/FREDERICK STS KITCHENER	254	0.02	0.12	0.21	0.37	0.78	1.59	0.37	2.5	1.1	1	0
27052	185 QUEEN ST S THOROLD	286	0.02	0.13	0.21	0.33	0.55	1.07	0.31	3.1	0.9	0	0
27055	STP GROUNDS, STANLEY AV NIAGARA FALLS	275	0.01	0.12	0.24	0.39	0.66	1.22	0.35	2.0	1.2	1	0
27056	ALLENDALE AV NIAGARA FALLS	330	0.00	0.01	0.14	0.22	0.37	0.75	0.20	2.1	0.7	0	0
27067	ARGYLE CRES (PUMP STN) ST CATHARINES	144	0.00	0.09	0.18	0.28	0.51	1.04	0.27	2.9	1.3	1	INS

TABLE A-7 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SUSPENDED PARTICLES UNIT = COHS/1000 FT RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 24HR	1YR
28028	EXHIBITION ST/CLARK ST GUELPH	187	0.03	0.13	0.23	0.36	0.64	1.40	0.35	3.0	1.2	4	INS
29000	ELGIN/KELLY ST HAMILTON	310	0.00	0.19	0.30	0.48	0.86	1.68	0.45	3.8	1.8	7	0
29001	HUGHSON/HUNTER HAMILTON	327	0.11	0.24	0.37	0.53	0.87	1.63	0.49	3.0	1.9	11	0
29025	BARTON/WENTWORTH HAMILTON	344	0.11	0.27	0.42	0.61	1.01	1.78	0.55	3.2	1.8	15	1
29102	467 BEACH BLVD HAMILTON	332	0.00	0.08	0.22	0.39	0.70	1.32	0.33	3.2	1.0	0	0
29105	NASH RD/KENTLEY DR HAMILTON	296	0.05	0.16	0.27	0.43	0.73	1.39	0.40	2.6	1.3	2	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	342	0.04	0.14	0.23	0.36	0.67	1.45	0.36	2.6	1.4	4	0
29118	MAIN ST W/HWY 403 HAMILTON	327	0.04	0.15	0.27	0.43	0.86	1.68	0.42	2.5	1.6	9	0
31049	MISSION, 381 YONGE ST TORONTO	290	0.24	0.43	0.62	0.88	1.37	2.16	0.78	3.2	2.1	46	1
31103	26 BREADALBANE BKUP TORONTO	352	0.00	0.13	0.23	0.35	0.61	1.18	0.32	2.1	1.2	2	0
31104	26 BREADALBANE TORONTO	352	0.03	0.17	0.27	0.40	0.69	1.29	0.38	2.2	1.3	2	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	346	0.02	0.18	0.28	0.44	0.80	1.73	0.42	3.5	1.6	5	0
33003	LAWRENCE/KENNEDY SCARBORO	347	0.00	0.14	0.25	0.40	0.76	1.57	0.39	3.1	1.3	3	0
35033	EVANS/ARNOLD AV ETOBICOKE	285	0.10	0.23	0.38	0.56	0.97	1.92	0.52	3.5	1.6	13	1
44015	BRONTE RD/WOBURN CRES OAKVILLE	233	0.03	0.14	0.26	0.42	0.72	1.53	0.39	3.0	1.5	3	INS

TABLE A-7 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - SUSPENDED PARTICLES UNIT = COHS/1000 FT RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 24HR	1YR
45025	PS, RITSON RD/OLIVE AV OSHAWA	281	0.02	0.11	0.22	0.39	0.77	1.57	0.37	2.9	1.4	8	0
51001	MCD GDS, RIDEAU/MURTEMBURG ST OTTAWA	301	0.00	0.00	0.11	0.21	0.41	0.95	0.19	2.7	0.8	0	0
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	339	0.00	0.00	0.00	0.00	0.14	0.40	0.04	1.5	0.4	0	0
63200	MTC 615 JAMES ST S THUNDER BAY	299	0.00	0.00	0.00	0.01	0.08	0.20	0.04	1.3	0.2	0	0
71068	MM. MERRIFIELD SCHOOL SAULT STE MARIE	306	0.00	0.10	0.25	0.47	1.00	2.25	0.45	3.8	1.6	16	0
77016	WATER TANK, ASH ST SUDBURY	343	0.00	0.00	0.02	0.17	0.36	0.94	0.16	3.4	0.8	0	0
77028	GOVERNMENT RD/EDWARD ST CONISTON	331	0.00	0.00	0.00	0.15	0.31	0.83	0.14	2.2	0.6	0	0
77075	KENNEDY ST NEW SUDBURY	318	0.00	0.00	0.00	0.16	0.34	1.06	0.15	2.3	0.8	0	0
77203	SCIENCE NORTH SUDBURY	356	0.00	0.05	0.13	0.25	0.53	1.21	0.26	4.1	1.4	2	0

TABLE A-8 10-YEAR TREND FOR SP

	Annual Mean (COH/1000 ft.)									
City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
CORNWALL	.18	.20	.18	.10	.16	.18	.16	.09	.06	.04
ETOBICOKE	.44	.58	.42	.31	.49	.37	.52	.47	.54	.52
HAMILTON	.56	.63	.54	.58	.57	.44	.55	.52	.57	.55
LONDON	.32	.32	.33	.30	.32	.31	.29	.30	.30	.27
NORTH YORK	.51	.55	.48	.54	.60	.57	.62	.56	–	–
OTTAWA	.16	.23	.14	.18	.18	.18	.19	.14	.15	.19
SARNIA	.35	.30	.27	.28	.27	.27	.29	.25	.31	.29
SCARBORO	.41	.37	.35	.40	.37	.32	.36	.34	.34	.38
SUDBURY	.13	.12	.13	.12	.12	.12	.15	.13	.16	.16
TORONTO	.40	.39	.34	.45	.46	.41	.47	.36	.39	.38
WINDSOR	.51	.47	.42	.41	.43	.47	.46	.41	.43	.37

TABLE A-9 TOTAL REDUCED SULPHUR (TRS) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - TOTAL REDUCED SULPHUR UNIT = PARTS/BILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	EXCEEDANCES OF PULP MILL CRIT. 1HR
12007	WRIGHT/WATER ST WINDSOR	308	0.0	0.0	0.0	0.9	3.9	31.3	2.2	131	20	102
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	285	0.0	0.0	0.0	0.0	1.0	4.6	0.4	13	6	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	345	0.0	0.0	0.0	0.0	1.7	4.7	0.5	15	4	0
18007	CONCESSION RD 2 LOT A TIVERTON	336	0.0	0.0	0.0	0.0	1.3	2.9	0.4	9	3	0
22086	CHEAPSIDE RD(3 KM S OF HWY 3) NANTICOKE	262	0.0	0.0	0.0	0.0	0.4	2.9	0.2	17	3	0
22904	WALPOLE S PS, SANDUSK RD NANTICOKE	281	0.0	0.0	0.0	0.0	0.0	4.4	0.2	28	4	1
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	274	0.0	0.0	0.0	0.8	6.3	24.3	2.2	81	22	51
27051	HOLY T CHURCH, NORTON/PORTAGE CHIPPAWA	314	0.0	0.0	0.5	1.9	4.2	10.4	1.8	81	11	14
27052	185 QUEEN ST S THOROLD	298	0.0	0.0	0.0	0.0	6.9	49.3	3.0	150	40	262
27055	STP GROUNDS, STANLEY AV NIAGARA FALLS	296	0.0	0.0	0.5	1.9	7.8	26.1	2.8	87	24	62
29000	ELGIN/KELLY ST HAMILTON	314	0.0	0.0	0.0	0.0	2.7	6.7	0.8	14	6	0
29025	BARTON/WENTWORTH HAMILTON	282	0.0	0.0	0.0	0.5	2.3	8.4	0.9	30	7	1
29102	467 BEACH BLVD HAMILTON	327	0.0	0.0	0.2	1.1	3.7	12.2	1.6	33	10	6
29114	VICKERS RD/EAST 18TH ST HAMILTON	363	0.0	0.0	0.0	0.0	2.0	7.1	0.8	19	6	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	293	0.0	0.1	0.7	1.5	3.0	8.9	1.6	46	9	4

TABLE A-9 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - TOTAL REDUCED SULPHUR UNIT = PARTS/BILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	EXCEEDANCES OF PULP MILL CRIT. 1HR
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	362	0.0	1.0	2.0	3.4	7.4	46.5	4.3	284	43	157
56068	SCHOOL, 435 SECOND ST W CORNWALL	265	0.0	0.0	0.0	0.7	4.9	20.4	1.8	71	12	33
56071	ST. PETER'S SCHOOL CORNWALL	346	0.0	0.0	0.0	1.9	17.4	81.8	6.1	296	52	556
61027	35 VAN HORNE AV DRYDEN	346	0.0	0.0	0.0	0.0	1.4	6.8	0.5	26	5	0
62030	PORTAGE/CHURCH ST FORT FRANCES	359	0.0	0.0	0.0	3.0	15.5	55.4	5.5	278	37	431
62032	CEMETERY,COLONIZATION RD W FORT FRANCES	345	0.0	0.0	0.0	0.0	4.3	22.1	1.8	215	26	61
63034	PENINSULA BLDG MARATHON	331	0.0	0.0	0.0	0.0	5.3	29.7	2.0	150	19	93
63046	CAN-CAR, MONTREAL ST THUNDER BAY	329	0.0	0.0	0.0	0.0	2.1	11.8	0.8	52	10	12
63084	RECREATION CENTRE RED ROCK	337	0.0	0.0	0.0	0.0	7.1	39.1	2.7	216	49	144
63090	ST MARTIN SCHOOL TERRACE BAY	316	0.0	0.0	0.0	0.0	7.1	34.0	2.4	159	27	121
63200	MTC 615 JAMES ST S THUNDER BAY	365	0.0	0.0	0.0	0.0	0.6	2.7	0.3	23	3	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	195	0.0	0.0	0.0	0.1	0.9	4.4	0.5	15	3	0
72084	ROSS RD SMOOTH ROCK FALLS	326	0.0	0.0	0.0	0.5	1.8	13.0	1.1	48	8	10
77203	SCIENCE NORTH SUDBURY	361	0.0	0.0	0.0	0.2	0.9	2.0	0.4	10	2	0

TABLE A-10 10-YEAR TREND FOR TRS

	Annual Mean (ppb)									
City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
CORNWALL	3.0	3.1	2.8	1.8	2.0	3.4	1.5	.8	2.6	4.3
FORT FRANCES	2.5	2.9	3.3	3.1	2.1	2.8	1.9	1.1	1.2	1.8
HAMILTON	1.6	2.4	.9	1.3	1.2	1.4	1.8	1.4	1.4	.9
THUNDER BAY	1.9	2.6	2.9	2.8	1.0	.5	.6	.8	1.0	.8

TABLE A-11 CARBON MONOXIDE (CO) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - CARBON MONOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	8HR	NO. OF TIMES ABOVE CRITERIA 1HR	8HR
12008	467 UNIVERSITY AV W WINDSOR	344	0.0	0.0	0.2	0.6	1.0	2.6	0.7	9	4	0	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	345	0.0	0.0	0.0	0.0	0.3	1.6	0.2	9	3	0	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	312	0.0	0.0	0.0	0.0	0.8	2.9	0.4	10	6	0	0
26029	EDNA/FREDERICK STS KITCHENER	314	0.0	0.0	0.2	0.6	1.3	3.7	0.8	12	6	0	0
29000	ELGIN/KELLY ST HAMILTON	309	0.1	0.3	0.6	0.9	1.6	2.9	1.2	8	5	0	0
29102	467 BEACH BLVD HAMILTON	333	0.0	0.0	0.0	0.0	0.7	1.9	0.3	10	3	0	0
31049	MISSION, 381 YONGE ST TORONTO	329	0.6	1.4	2.2	3.3	5.5	12.6	3.3	25	19	0	6
31104	26 BREADALBANE TORONTO	326	0.0	0.1	0.5	0.9	1.8	3.8	1.1	14	8	0	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	336	0.0	0.0	0.3	0.6	1.3	3.7	0.8	10	7	0	0
31190	CN TOWER, 301 FRONT ST W TORONTO	345	0.0	0.0	0.0	0.0	0.7	1.0	0.3	2	2	0	0
33003	LAWRENCE/KENNEDY SCARBORO	353	0.0	0.1	0.5	0.9	1.8	3.8	1.1	13	6	0	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	353	0.1	0.3	0.6	0.9	1.8	3.3	1.2	7	5	0	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	360	0.0	0.3	0.6	0.9	1.6	2.8	1.2	7	4	0	0
35033	EVANS/ARNOLD AV ETOBICOKE	349	0.0	0.2	0.6	0.9	1.7	3.9	1.1	11	6	0	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	356	0.0	0.3	0.5	0.8	1.2	2.2	1.0	9	5	0	0

TABLE A-11 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - CARBON MONOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	8HR	NO. OF TIMES ABOVE CRITERIA 1HR	8HR
44015	BRONTE RD/HOBURN CRES OAKVILLE	332	0.0	0.0	0.1	0.6	1.5	5.3	0.8	10	8	0	0
45025	PS, RITSON RD/OLIVE AV OSHAWA	338	0.0	0.0	0.2	0.7	1.3	3.9	0.8	11	5	0	0
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	344	0.1	0.4	0.7	1.0	1.8	3.9	1.3	13	7	0	0
51001	MCD GDS, RIDEAU/WURTEMBURG ST OTTAWA	292	0.0	0.0	0.0	0.0	0.7	2.0	0.3	8	3	0	0
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	314	0.0	0.0	0.0	0.0	0.8	3.1	0.3	9	5	0	0
63200	MTC 615 JAMES ST S THUNDER BAY	349	0.0	0.0	0.0	0.0	0.6	2.4	0.3	10	4	0	0
71068	MM. MERRIFIELD SCHOOL SAULT STE MARIE	313	0.0	0.0	0.0	0.5	1.1	3.6	0.7	9	5	0	0
77016	WATER TANK, ASH ST SUDBURY	282	0.0	0.0	0.0	0.0	0.0	1.5	0.1	7	2	0	0
77203	SCIENCE NORTH SUDBURY	168	0.0	0.0	0.0	0.4	0.8	1.2	0.5	5	2	0	0

TABLE A-12 10-YEAR TREND FOR CO

	Annual Mean (ppm)									
City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
CORNWALL	.5	.9	1.1	1.1	1.0	.2	.2	.2	.2	.3
ETOBICOKE	1.6	1.3	1.1	1.0	1.1	1.6	1.4	1.3	1.2	1.1
HAMILTON	1.2	1.5	.9	1.2	1.1	.9	.8	1.2	1.1	1.2
KITCHENER	1.4	1.0	1.1	1.1	1.0	1.0	.9	.8	.9	.8
LONDON	.9	.4	.3	.4	.3	.3	.4	.3	.3	.4
NORTH YORK	1.9	1.6	1.4	1.7	2.3	-	1.3	1.4	1.3	1.2
OTTAWA	.5	1.0	1.2	1.3	.9	.2	.3	.6	.6	.3
SARNIA	.4	.3	.3	.2	.2	.1	.1	.2	.2	.2
SCARBORO	2.0	1.5	1.5	1.4	1.6	1.2	1.4	1.3	1.0	1.1
ST CATHARINES	.9	.9	.6	1.0	.4	.4	.4	.2	.2	-
SUDBURY	.3	.2	.1	.1	.1	.1	.1	.1	.1	.1
TORONTO	1.8	1.5	-	1.3	1.5	1.1	1.0	1.1	1.0	1.1
WINDSOR	2.2	2.0	1.7	1.1	.5	.8	.5	.5	.5	.7

TABLE A-13 TOTAL HYDROCARBON (THC) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - TOTAL HYDROCARBONS UNIT = PARTS/MILLION

RUN DATE
JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR
12008	467 UNIVERSITY AV W WINDSOR	291	1.76	2.03	2.20	2.40	2.76	3.76	2.29	9.2	3.6
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	340	1.47	1.66	1.84	2.07	2.59	3.87	2.00	6.8	3.3
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	277	2.30	2.59	2.82	3.12	3.64	5.48	2.99	14.7	4.8
31104	26 BREADALBANE TORONTO	349	1.33	1.54	1.70	1.87	2.17	3.04	1.79	5.1	3.2
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	332	1.63	1.82	1.98	2.19	2.67	4.44	2.16	9.9	3.7
33003	LAWRENCE/KENNEDY SCARBORO	334	1.86	2.02	2.16	2.33	2.77	4.00	2.31	9.0	3.4
34002	SC CTR, 770 DON MILLS RD NORTH YORK	333	1.09	1.39	1.61	1.85	2.27	3.18	1.72	11.0	3.3
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	337	1.73	1.89	2 04	2.25	2.87	4.61	2.25	12.2	4.1
35033	EVANS/ARNOLD AV ETOBICOKE	186	1.34	1.52	1.65	1.87	2.52	3.75	1.86	5.9	3.5
44015	BRONTE RD/WOBURN CRES OAKVILLE	333	1.06	1.44	1.81	2.25	2.91	4.40	1.98	11.6	5.0

TABLE A-14 10-YEAR TREND FOR THC

Annual Mean (ppm)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
ETOBICOKE	2.56	2.29	2.17	2.19	2.28	2.58	2.23	2.39	2.31	1.86
LONDON	2.43	2.30	2.41	2.36	2.48	2.57	2.89	2.85	2.80	2.99
NORTH YORK	2.03	1.67	1.48	1.68	2.11	2.31	2.19	2.18	2.28	1.72
SARNIA	2.64	1.99	1.86	2.09	2.12	2.02	2.04	1.93	1.62	2.00
SCARBORO	1.87	1.64	1.54	2.00	1.83	1.90	2.08	2.39	2.20	2.31
TORONTO	1.48	1.32	1.43	1.71	1.66	1.37	1.89	1.76	1.61	1.79
WINDSOR	2.27	1.86	2.22	2.18	2.12	2.09	2.29	2.08	2.15	2.29

TABLE A-15 REACTIVE HYDROCARBON (RHC) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - REACTIVE HYDROCARBONS UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR
12008	467 UNIVERSITY AV W WINDSOR	280	0.19	0.29	0.43	0.52	0.65	1.13	0.48	3.0	1.0
22071	EXPERIMENTAL FARM SIMCOE	240	0.03	0.09	0.13	0.17	0.24	0.30	0.18	0.7	0.3
22904	WALPOLE S PS, SANDUSK RD NANTICOKE	287	0.00	0.00	0.04	0.09	0.17	0.34	0.10	1.0	0.3
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	306	0.00	0.03	0.08	0.13	0.18	0.27	0.13	0.5	0.3
29000	ELGIN/KELLY ST HAMILTON	120	0.01	0.04	0.08	0.12	0.23	0.58	0.16	1.2	0.4
29102	467 BEACH BLVD HAMILTON	340	0.07	0.14	0.19	0.25	0.32	0.47	0.25	0.9	0.5

TABLE A-16 NITROGEN DIOXIDE (NO_2) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NITROGEN DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR
12008	467 UNIVERSITY AV W WINDSOR	327	.006	.014	.021	.028	.039	.059	.027	.10	.05	0	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	309	.000	.000	.004	.012	.026	.045	.012	.08	.05	0	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	354	.001	.008	.014	.021	.034	.054	.021	.12	.05	0	0
15013	PUC BLDG PARKHILL	274	.000	.000	.001	.006	.011	.025	.007	.07	.03	0	0
22071	EXPERIMENTAL FARM SIMCOE	298	.000	.000	.000	.002	.010	.028	.005	.08	.02	0	0
22086	CHEAPSIDE RD(3 KM S OF HWY 3) NANTICOKE	275	.000	.000	.000	.000	.005	.018	.002	.03	.02	0	0
22901	PROVINCIAL PARK LONG POINT	281	.000	.000	.003	.007	.013	.029	.008	.06	.04	0	0
26029	EDNA/FREDERICK STS KITCHENER	312	.004	.013	.021	.028	.039	.059	.026	.10	.06	0	0
29000	ELGIN/KELLY ST HAMILTON	302	.005	.014	.020	.027	.038	.057	.026	.14	.06	0	0
29102	467 BEACH BLVD HAMILTON	342	.000	.007	.017	.025	.037	.056	.022	.11	.06	0	0
29118	MAIN ST W/HWY 403 HAMILTON	339	.000	.005	.011	.018	.030	.054	.018	.10	.07	0	0
31049	MISSION, 381 YONGE ST TORONTO	359	.012	.022	.029	.037	.049	.076	.036	.12	.07	0	0
31104	26 BREADALBANE TORONTO	348	.003	.012	.019	.026	.039	.065	.025	.10	.07	0	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	329	.003	.012	.020	.030	.046	.072	.028	.17	.08	0	0
31190	CN TOWER, 301 FRONT ST W TORONTO	287	.000	.000	.000	.005	.011	.030	.006	.08	.03	0	0

TABLE A-16 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NITROGEN DIOXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR	24HR
33003	LAWRENCE/KENNEDY SCARBORO	340	.000	.006	.014	.024	.040	.069	.022	.17	.08	0	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	353	.006	.013	.018	.024	.035	.057	.025	.13	.06	0	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	359	.007	.015	.022	.029	.041	.067	.028	.10	.07	0	0
35033	EVANS/ARNOLD AV ETOBICOKE	346	.008	.019	.027	.035	.048	.073	.032	.11	.07	0	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	285	.002	.008	.014	.020	.032	.055	.021	.11	.07	0	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	340	.000	.004	.010	.018	.029	.050	.017	.10	.05	0	0
45025	PS, RITSON RD/OLIVE AV OSHAWA	318	.000	.007	.015	.025	.038	.060	.022	.10	.06	0	0
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	315	.005	.013	.018	.025	.036	.054	.025	.09	.04	0	0
48002	HWY47/E OF HWY48 STOUFFVILLE	341	.000	.002	.006	.011	.024	.045	.013	.09	.04	0	0
49010	HWY 117/PAINT LAKE RD DORSET	222	.000	.000	.000	.000	.005	.012	.002	.03	.02	0	0
51001	MCD GDS, RIDEAU/MURTEMBURG ST OTTAWA	334	.000	.002	.008	.016	.028	.048	.015	.09	.05	0	0
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	290	.000	.000	.003	.008	.020	.050	.010	.09	.05	0	0
63200	MTC 615 JAMES ST S THUNDER BAY	322	.000	.001	.005	.010	.022	.044	.012	.06	.04	0	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	312	.000	.004	.008	.015	.026	.048	.015	.19	.06	0	0
77203	SCIENCE NORTH SUDBURY	362	.000	.000	.004	.009	.020	.042	.011	.12	.04	0	0

TABLE A-17 10-YEAR OLD TREND FOR NO_2

	Annual Mean (ppm)									
City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
CORNWALL	.012	.011	.011	.011	.010	.011	.011	.010	.011	.010
ETOBICOKE	.025	.022	.018	.022	.021	.021	.024	.026	.027	.032
HAMILTON	.046	.029	.027	.029	.031	.029	.029	.025	.027	.026
KITCHENER	.032	.030	.026	.026	.028	.025	.027	.029	.032	.026
LONDON	.031	.030	.020	.017	.021	.021	.024	.025	.026	.021
NORTH YORK	.026	.023	.020	.014	.022	.023	.026	.027	.023	.025
OAKVILLE	.020	.022	.023	.020	.018	.016	.018	.016	.020	.017
OTTAWA	.018	.012	.017	.016	.015	.014	.014	.012	.012	.015
SARNIA	.031	.019	.022	.018	.022	.020	.023	.019	.021	.012
SCARBORO	.031	.027	.030	.025	.025	.019	.018	.018	.022	.022
SIMCOE	.014	.010	.012	.014	.010	.009	.009	.006	.005	.005
ST CATHARINES	.022	.026	.020	.022	.019	.020	.018	.017	.019	-
SUDBURY	.012	.006	.006	.007	.006	.006	.006	.007	.010	.011
TORONTO	.032	.029	.028	.025	.027	.025	.027	.026	.027	.025
WINDSOR	.040	.033	.031	.030	.029	.026	.027	.026	.025	.027

TABLE A-18 NITRIC OXIDE (NO) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NITRIC OXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR
12008	467 UNIVERSITY AV W WINDSOR	344	.000	.000	.002	.008	.030	.116	.014	0.44	0.11
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	349	.000	.000	.000	.000	.015	.065	.006	0.44	0.07
15001	MRN FAIR GROUNDS, KING/RECTORY LONDON	279	.000	.000	.004	.010	.036	.190	.018	0.45	0.15
15013	PUC BLDG PARKHILL	294	.000	.000	.000	.000	.008	.038	.004	0.10	0.04
22071	EXPERIMENTAL FARM SIMCOE	321	.000	.000	.000	.004	.008	.017	.005	0.04	0.01
22086	CHEAPSIDE RD(3 KM S OF HWY 3) NANTICOKE	275	.000	.000	.001	.006	.015	.030	.008	0.10	0.04
22901	PROVINCIAL PARK LONG POINT	278	.000	.000	.000	.000	.006	.020	.003	0.06	0.03
26029	EDNA/FREDERICK STS KITCHENER	361	.000	.004	.015	.043	.134	.373	.051	1.06	0.26
29000	ELGIN/KELLY ST HAMILTON	226	.000	.000	.000	.009	.032	.121	.014	0.47	0.15
29102	467 BEACH BLVD HAMILTON	333	.000	.000	.003	.018	.054	.158	.021	0.42	0.14
29118	MAIN ST W/HWY 403 HAMILTON	339	.000	.003	.009	.024	.086	.296	.03	0.57	0.22
31049	MISSION, 381 YONGE ST TORONTO	344	.015	.036	.062	.101	.180	.333	.088	0.68	0.32
31104	26 BREADALBANE TORONTO	338	.000	.000	.007	.018	.047	.154	.021	0.41	0.11
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	341	.000	.000	.006	.018	.062	.227	.026	0.81	0.16
31190	CN TOWER, 301 FRONT ST W TORONTO	296	.000	.000	.000	.000	.000	.021	.001	0.15	0.02

TABLE A-18 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NITRIC OXIDE UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR
33003	LAWRENCE/KENNEDY SCARBORO	333	.000	.000	.010	.031	.088	.267	.035	0.73	0.26
34002	SC CTR, 770 DON MILLS RD NORTH YORK	347	.000	.001	.006	.015	.064	.213	.026	0.44	0.19
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	298	.000	.002	.007	.017	.071	.255	.028	0.70	0.23
35033	EVANS/ARNOLD AV ETOBICOKE	354	.004	.015	.033	.060	.131	.364	.061	0.75	0.27
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	333	.000	.000	.005	.014	.052	.239	.023	0.62	0.22
44015	BRONTE RD/WOBURN CRES OAKVILLE	335	.000	.000	.000	.009	.044	.198	.018	0.64	0.13
45025	PS, RITSON RD/OLIVE AV OSHAWA	311	.000	.000	.000	.011	.047	.196	.019	0.61	0.16
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	360	.000	.003	.009	.022	.067	.260	.030	0.72	0.20
48002	HWY47/E OF HWY48 STOUFFVILLE	322	.000	.000	.000	.003	.014	.062	.007	0.16	0.04
49010	HWY 117/PAINT LAKE RD DORSET	222	.000	.000	.000	.000	.000	.000	.000	0.02	0.00
51001	MCD GDS, RIDEAU/MURTEMBURG ST OTTAWA	345	.000	.000	.000	.004	.031	.137	.012	0.47	0.09
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	285	.000	.000	.000	.004	.024	.150	.011	0.56	0.11
63200	MTC 615 JAMES ST S THUNDER BAY	322	.000	.000	.002	.008	.033	.147	.015	0.33	0.09
71068	MM. MERRIFIELD SCHOOL SAULT STE MARIE	305	.000	.001	.007	.014	.046	.197	.023	0.91	0.47
77203	SCIENCE NORTH SUDBURY	362	.000	.000	.000	.004	.014	.103	.008	0.41	0.08

TABLE A-19 10-YEAR TREND FOR NO

Annual Mean (ppm)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
CORNWALL	.008	.009	.007	.006	.005	.008	.007	.008	.005	.011
ETOBICOKE	.026	.027	.019	.026	.027	.026	.026	.027	.031	.061
HAMILTON	.027	.030	.021	.024	.024	.018	.023	.019	.022	.014
KITCHENER	.046	.044	.037	.058	.038	.045	.046	.047	.051	.051
LONDON	.020	.018	.016	.018	.015	.014	.017	.013	.019	.018
NORTH YORK	.036	.034	.028	.050	.036	.030	.027	.028	.022	.026
OAKVILLE	.028	.018	.020	.020	.015	.012	.017	.016	.020	.018
OTTAWA	.020	.026	.013	.015	.013	.009	.012	.011	.010	.012
SARNIA	.019	.017	.010	.014	.009	.010	.008	.007	.009	.006
SCARBORO	.049	.037	.029	.034	.028	.028	.033	.032	.032	.035
SIMCOE	.005	.003	.001	.002	.002	.002	.005	.004	.007	.005
ST CATHARINES	.021	.022	.009	.014	.008	.009	.016	.009	.008	-
SUDBURY	.007	.006	.005	.006	.007	.005	.007	.010	.008	.008
TORONTO	.022	.019	.016	.023	.022	.019	.021	.019	.022	.021
WINDSOR	.027	.021	.019	.017	.011	.016	.028	.015	.021	.014

TABLE A-20 TOTAL NITROGEN OXIDE (NO_x) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NITROGEN OXIDES UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITHMETIC MEAN	MAXIMUM 1HR	24HR
12008	467 UNIVERSITY AV W WINDSOR	316	.008	.019	.028	.041	.070	.169	.041	0.51	0.15
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	310	.000	.000	.006	.017	.043	.107	.019	0.48	0.11
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	277	.003	.013	.022	.035	.068	.234	.038	0.51	0.20
15013	PUC BLDG PARKHILL	271	.000	.000	.004	.009	.020	.042	.011	0.12	0.04
22071	EXPERIMENTAL FARM SIMCOE	297	.000	.000	.004	.009	.018	.039	.010	0.09	0.03
22086	CHEAPSIDE RD(3 KM S OF HWY 3) NANTICOKE	275	.000	.000	.003	.008	.018	.039	.010	0.13	0.04
22901	PROVINCIAL PARK LONG POINT	278	.000	.002	.005	.008	.017	.035	.011	0.09	0.04
26029	EDNA/FREDERICK STS KITCHENER	312	.011	.024	.039	.073	.164	.397	.075	1.13	0.29
29000	ELGIN/KELLY ST HAMILTON	226	.007	.016	.025	.038	.069	.164	.039	0.54	0.21
29102	467 BEACH BLVD HAMILTON	342	.000	.009	.029	.050	.087	.199	.043	0.46	0.18
29118	MAIN ST W/HWY 403 HAMILTON	339	.002	.014	.025	.047	.118	.333	.052	0.61	0.27
31049	MISSION, 381 YONGE ST TORONTO	341	.037	.066	.098	.142	.229	.392	.124	0.75	0.38
31104	26 BREADALBANE TORONTO	338	.006	.019	.031	.048	.087	.208	.047	0.48	0.16
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	327	.006	.018	.031	.053	.108	.297	.054	0.98	0.23
31190	CN TOWER, 301 FRONT ST W TORONTO	284	.000	.000	.000	.006	.015	.047	.008	0.21	0.04

TABLE A-20 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NITROGEN OXIDES UNIT = PARTS/MILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR
33003	LAWRENCE/KENNEDY SCARBORO	333	.000	.012	.032	.060	.129	.323	.057	0.84	0.32
34002	SC CTR, 770 DON MILLS RD NORTH YORK	343	.011	.021	.030	.045	.097	.247	.050	0.49	0.23
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	298	.012	.023	.035	.053	.109	.301	.057	0.76	0.29
35033	EVANS/ARNOLD AV ETOBICOKE	345	.021	.041	.066	.099	.180	.429	.094	0.85	0.32
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	284	.003	.012	.023	.039	.084	.274	.043	0.57	0.25
44015	BRONTE RD/WOBURN CRES OAKVILLE	328	.000	.006	.016	.032	.075	.235	.035	0.73	0.17
45025	PS, RITSON RD/OLIVE AV OSHAWA	311	.001	.010	.023	.040	.087	.249	.042	0.70	0.21
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	313	.010	.022	.033	.050	.101	.294	.054	0.77	0.22
48002	HWY47/E OF HWY48 STOUFFVILLE	322	.000	.004	.009	.018	.040	.104	.020	0.19	0.09
49010	HWY 117/PAINT LAKE RD DORSET	222	.000	.000	.000	.000	.005	.014	.002	0.04	0.02
51001	MCD GDS, RIDEAU/WURTEMBURG ST OTTAWA	333	.000	.003	.010	.024	.063	.178	.028	0.53	0.12
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	283	.000	.001	.007	.016	.042	.185	.021	0.76	0.19
63200	MTC 615 JAMES ST S THUNDER BAY	325	.000	.004	.012	.023	.058	.185	.027	0.37	0.12
71068	WM. HERRIFIELD SCHOOL SAULT STE MARIE	306	.003	.011	.019	.032	.073	.240	.038	0.95	0.49
77203	SCIENCE NORTH SUDBURY	362	.000	.003	.007	.015	.034	.146	.019	0.49	0.12

TABLE A-21 OZONE (O_3) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - OZONE UNIT = PARTS/BILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR
10001	COLLEGE OF AGRIC TECH HURON PARK	362	8.6	16.7	22.9	28.9	44.7	80.2	25.9	121	73	89
12008	467 UNIVERSITY AV W WINDSOR	346	0.1	4.9	12.9	21.9	40.9	77.7	17.6	110	68	69
13021	MOE WATER PUMP STN, MIDDLE RD MERLIN	352	7.7	16.4	24.1	31.8	50.3	80.8	27.3	126	71	95
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	348	2.9	12.1	19.8	27.2	40.1	70.8	21.8	170	71	44
14118	HWY 25/HWY 26 MANDAUMIN	355	6.6	15.8	22.8	29.9	46.7	85.7	25.9	134	73	133
14119	PUC BLDG THEDFORD	336	6.7	16.1	23.5	30.1	45.6	79.2	25.8	139	70	80
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	336	0.9	8.3	15.9	24.1	41.2	72.6	19.4	117	58	34
15013	PUC BLDG PARKHILL	362	6.5	16.6	24.1	32.5	50.5	89.2	27.5	144	73	158
18007	CONCESSION RD 2 LOT A TIVERTON	339	15.3	24.7	29.9	36.3	51.3	86.6	33.0	117	74	167
22071	EXPERIMENTAL FARM SIMCOE	312	8.8	18.1	25.3	33.0	51.3	78.9	28.4	117	71	72
22901	PROVINCIAL PARK LONG POINT	278	11.9	21.9	28.8	36.7	53.5	89.5	31.7	132	89	139
26029	EDNA/FREDERICK STS KITCHENER	346	0.4	7.1	13.4	20.2	36.5	67.8	17.1	94	70	21
28028	EXHIBITION ST/CLARK ST GUELPH	329	2.2	12.9	21.4	29.4	44.9	79.5	23.8	104	73	75
29000	ELGIN/KELLY ST HAMILTON	315	0.0	5.2	12.0	20.4	36.7	69.2	16.2	105	68	24
29105	NASH RD/KENTLEY DR HAMILTON	335	0.0	6.7	14.9	24.2	42.9	78.7	19.2	111	70	69

TABLE A-21 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - OZONE UNIT = PARTS/BILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR
29114	VICKERS RD/EAST 18TH ST HAMILTON	344	0.0	7.3	15.5	24.4	44.2	80.4	19.8	114	71	85
29118	MAIN ST W/HWY 403 HAMILTON	349	0.0	2.6	9.9	17.7	35.0	70.4	14.3	103	68	36
31104	26 BREADALBANE TORONTO	342	0.8	4.6	10.6	18.6	34.4	72.9	15.4	133	69	51
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	331	0.0	3.3	11.0	19.6	35.2	71.5	15.2	149	65	46
31190	CN TOWER, 301 FRONT ST W TORONTO	316	8.5	19.8	28.3	37.5	56.1	90.0	31.5	152	84	170
33003	LAWRENCE/KENNEDY SCARBORO	352	0.0	4.5	11.7	20.9	39.1	77.3	16.8	117	77	72
34002	SC CTR, 770 DON MILLS RD NORTH YORK	358	0.0	2.7	6.2	12.0	19.9	33.2	8.9	54	24	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	356	0.0	3.3	11.5	21.1	37.1	74.4	16.0	128	56	52
35033	EVANS/ARNOLD AV ETOBICOKE	348	0.0	2.1	7.7	15.9	33.7	73.0	13.4	128	65	47
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	334	1.3	8.8	16.1	24.7	40.0	71.3	19.7	167	67	41
44015	BRONTE RD/HOBURN CRES OAKVILLE	353	0.0	6.8	16.1	26.0	42.6	80.5	19.8	165	65	88
45025	PS, RITSON RD/OLIVE AV OSHAWA	347	0.0	7.4	15.9	23.1	35.0	71.6	17.9	137	57	40
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	349	0.0	3.6	10.4	18.2	33.9	68.0	14.5	141	51	32
47035	509 VICTORIA ST E ALLISTON	283	4.1	13.7	21.1	27.3	40.3	65.8	22.5	94	59	14
48002	HWY47/E OF HWY48 STOUFFVILLE	329	4.5	15.2	21.7	27.3	38.9	70.3	22.9	105	64	30

TABLE A-21 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - OZONE UNIT = PARTS/BILLION RUN DATE JUL 15, 1988

STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES 10	30	50	70	90	99	ARITH-METIC MEAN	MAXIMUM 1HR	24HR	NO. OF TIMES ABOVE CRITERIA 1HR
49010	HWY 117/PAINT LAKE RD DORSET	360	3.8	16.8	25.2	32.8	46.3	74.2	26.3	98	62	41
51001	MCD GDS, RIDEAU/WURTEMBURG ST OTTAWA	344	0.3	6.3	14.2	22.0	32.8	52.7	16.1	70	43	0
56051	MEMORIAL PK, BEDFORD/THIRD STS CORNWALL	343	2.1	12.0	19.0	26.1	39.5	62.4	20.8	91	64	11
59006	CITY HALL, 500 GEORGE ST PETERBORO	358	4.8	12.2	18.6	25.5	37.9	64.1	20.9	101	57	20
63200	MTC 615 JAMES ST S THUNDER BAY	264	0.1	9.1	16.8	23.1	30.0	44.1	16.8	62	41	0
71068	WM. HERRIFIELD SCHOOL SAULT STE MARIE	270	3.6	14.1	21.9	29.1	40.0	58.2	22.7	89	53	5
77016	WATER TANK, ASH ST SUDBURY	347	4.5	12.4	17.3	22.7	34.5	57.9	19.4	89	58	6
77203	SCIENCE NORTH SUDBURY	331	9.9	19.0	24.8	30.7	40.1	58.6	25.8	89	58	5

TABLE A-22 10-YEAR TREND FOR O_3

Annual Mean (ppb)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
CORNWALL	25.7	23.4	24.8	22.7	21.5	22.7	27.6	25.8	22.8	20.8
ETOBICOKE	19.1	11.0	13.4	14.5	15.6	15.7	16.5	18.1	16.8	13.4
HAMILTON	16.3	15.3	17.4	16.3	16.9	18.7	18.0	19.0	16.4	16.2
HURON PARK	29.8	25.9	23.6	23.9	23.4	24.2	26.5	26.5	26.1	25.9
KITCHENER	27.6	20.5	20.7	18.8	17.8	18.9	18.3	19.9	17.0	17.1
LONDON	20.5	16.6	18.5	19.8	21.3	21.0	19.4	21.3	18.4	19.4
MANDAUMIN	29.3	27.2	22.3	23.4	22.5	19.1	25.9	27.9	23.1	25.9
MERLIN	28.2	24.7	23.6	23.8	25.3	22.6	21.0	22.0	19.8	27.3
NORTH YORK	14.5	13.1	16.3	15.6	14.5	18.3	15.5	11.8	7.4	8.9
OAKVILLE	20.5	-	23.0	17.3	16.0	18.1	16.7	19.6	18.5	19.8
OTTAWA	19.2	17.2	15.4	15.2	17.1	17.6	17.8	19.2	17.3	16.1
SARNIA	22.7	23.2	21.6	21.3	22.7	23.0	23.3	22.9	20.9	21.8
SCARBORO	17.2	14.4	13.8	13.3	14.8	16.7	14.9	13.9	16.6	16.8
SIMCOE	35.2	28.1	26.3	28.9	32.3	30.0	28.7	30.6	27.6	28.4
ST CATHARINES	24.0	18.8	20.8	20.0	21.2	23.2	20.3	17.9	21.9	-
STOUFFVILLE	28.9	24.2	22.8	19.4	22.7	20.5	21.0	23.3	20.0	22.9
SUDBURY	18.0	18.3	13.9	15.6	16.0	14.2	15.8	13.4	17.1	19.4
TORONTO	17.3	16.4	15.7	15.3	14.3	16.7	17.1	16.2	14.6	15.4
WINDSOR	18.0	15.7	19.9	18.8	18.1	18.7	18.9	19.7	17.4	17.6

TABLE A-23 TOTAL SUSPENDED PARTICULATE (TSP) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - TOTAL SUSPENDED PARTICULATE UNIT - MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	NO OF TIMES ABOVE CRITERIA 24-HR	1-YR
10015	PUC BLDG, 64 WEST ST GODERICH	56	17	29	36	41	63	124	149	40	35	1	0
11001	309 THOMAS ST ST MARYS	59	19	31	43	84	128	199	222	65	49	7	0
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	35	48	56	74	104	130	143	64	58	1	0
12005	7730 RIVERSIDE DR E WINDSOR	60	23	34	42	53	82	105	124	47	42	1	0
12006	BEACH LANE/HWY 18 LA SALLE	57	41	53	70	85	111	146	173	72	66	4	1
12007	WRIGHT/WATER ST WINDSOR	54	43	58	66	88	107	150	154	73	68	2	1
12008	467 UNIVERSITY AV W WINDSOR	304	41	54	68	86	118	190	439	76	68	28	1
12009	9725 RIVERSIDE DR E LITTLE RIVER	59	26	40	45	59	87	134	144	54	47	2	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	24	31	41	52	78	86	87	45	41	0	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	40	54	87	116	178	322	452	101	84	16	1
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	53	72	94	115	150	167	178	96	89	14	1
12016	COLLEGE/SOUTH ST WINDSOR	59	42	52	64	85	108	178	215	73	66	5	1
12036	1802 GEORGE AV WINDSOR	58	35	46	54	70	101	169	187	64	58	2	0
12037	3225 CALIFORNIA ST WINDSOR	54	27	37	43	54	69	126	156	48	44	1	0
12038	2885 HOWARD AV WINDSOR	54	45	66	80	98	127	217	221	89	81	7	1
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	35	55	63	80	114	147	148	71	65	5	1
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	30	44	57	62	86	118	119	57	52	0	0
12049	643 ALEXANDRINE WINDSOR	59	40	52	57	73	95	175	177	67	62	3	1
12051	604 CAPITOL/REMINGTON WINDSOR	56	38	48	60	86	118	155	190	71	64	6	1
12053	415 FRONT ST AMHERSTBURG	51	21	28	43	51	85	116	117	45	40	0	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	56	31	43	52	64	82	94	97	55	51	0	0
14001	GENERAL HOSPITAL, 220 MITTON ST SARNIA	56	21	26	33	49	71	96	114	41	37	0	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	15	26	36	49	69	105	142	40	34	1	0
14030	RR1 (W OF HOUSE) CORUNNA	59	16	25	32	42	62	117	145	38	33	1	0
14031	RR1 (W OF BARN) MOORETOWN	56	16	22	28	36	53	100	122	33	29	1	0
14054	SARNIA YACHT CLUB, POINT EDWARD SARNIA	57	20	28	46	57	78	134	168	48	40	1	0

TABLE A-23 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - TOTAL SUSPENDED PARTICULATE UNIT - MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	NO OF TIMES ABOVE CRITERIA 24-HR	1-YR
14059	ST CLAIR BLVD/HWY 40 CORUNNA	57	18	28	37	47	59	89	101	39	35	0	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	28	34	43	51	72	115	158	46	42	1	0
14151	DAVID/FRONT ST SARNIA	60	22	38	48	62	80	133	141	53	47	2	0
14152	CHRISTINA/EXMOUTH ST SARNIA	87	43	52	68	83	123	197	200	76	68	10	1
14153	704 MARA ST POINT EDWARD SARNIA	81	20	36	52	77	99	165	167	61	50	6	0
15001	MRN FAIR GROUNDS, KING/RECTORY LONDON	57	33	49	69	92	133	264	282	77	65	9	1
15003	362 DUNDAS ST LONDON	60	26	44	53	77	100	145	149	62	54	4	0
15006	16 ALEXANDRIA ST ST THOMAS	51	36	45	68	87	126	215	243	75	65	7	1
15008	EDGEWARE RD (NNW VARTA PLT) ST THOMAS	57	21	33	38	51	74	147	200	45	39	1	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	13	22	32	44	58	110	187	36	29	1	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	23	40	53	70	98	170	175	61	52	5	0
15015	951 COMMISSIONERS RD E LONDON	58	20	37	43	56	79	122	164	49	43	1	0
15016	801 COMMISSIONERS RD E LONDON	58	21	36	46	64	85	205	208	55	46	2	0
15017	8 MOUNTSFIELD DR LONDON	58	24	39	50	67	86	148	191	55	49	2	0
17006	ST ANTHONY'S SS, HWY 2 BEACHVILLE	51	34	48	67	92	136	247	324	79	67	7	1
17020	HWY 2 RR 2 (J SPRIEL PROP) INGERSOLL	60	30	45	58	73	105	160	163	64	57	5	0
17021	OXFORD CTY RD 6 (HESSTON FARM) EMBRO	71	26	38	53	83	146	244	310	70	55	10	0
17022	182 WATER ST WINGHAM	30	35	43	58	87	141	300	341	82	66	4	INS
18014	369 LEOPOLD ST WINGHAM	24	14	26	41	64	73	157	185	50	39	1	INS
22087	JARVIS COMMUNITY CENTRE,JAMES ST JARVIS	54	19	31	39	61	95	221	344	55	43	3	0
22090	ST GEORGE/ALMA PORT DOVER	51	16	29	39	62	83	120	128	48	40	1	0
22092	RAINHAM RD/SANDUSK RD JARVIS	56	15	22	27	36	51	100	102	33	28	0	0
22904	WALPOLE S PS, SANDUSK RD NANTICOKE	50	15	27	32	41	67	158	199	39	32	2	0
22907	PAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	31	40	49	58	101	155	185	57	51	3	0
22961	NANTICOKE RD/WALPOLE CON 2 NANTICOKE	56	17	32	36	51	78	133	144	44	37	2	0
22964	N 2 KM NANTICOKE GS NANTICOKE	59	15	25	35	44	59	88	110	37	32	0	0

TABLE A-23 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - TOTAL SUSPENDED PARTICULATE UNIT - MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	NO OF TIMES ABOVE CRITERIA 24-HR	1-YR
22965	HWY 6/NORFOLK CON 2 JARVIS	58	18	30	37	47	69	145	173	43	37	2	0
26029	EDNA/FREDERICK STS KITCHENER	57	32	48	61	79	101	248	271	71	61	5	1
27045	337 ALBERTA/DEVON ST WELLAND	50	27	38	47	63	77	121	157	52	48	1	0
27047	DAVIS/FRAZER PORT COLBORNE	50	22	38	48	59	82	113	126	51	45	1	0
27050	4057 VICTORIA AV NIAGARA FALLS	56	41	55	83	97	114	217	274	82	73	5	1
27051	HOLY T CHURCH, NORTON/PORTAGE CHIPPAWA	56	30	48	59	74	103	177	189	67	58	5	0
27052	185 QUEEN ST S THOROLD	51	79	122	169	241	371	456	483	197	167	36	1
27055	STP GROUNDS, STANLEY AV NIAGARA FALLS	51	34	63	84	101	162	228	258	93	79	13	1
27056	ALLENDALE AV NIAGARA FALLS	58	26	37	45	53	72	111	125	49	45	1	0
28027	HANLON EXPWY/SPEED RIVER GUELPH	57	25	32	49	66	136	204	220	63	50	7	0
28028	EXHIBITION ST/CLARK ST GUELPH	57	17	28	46	57	86	163	184	49	39	2	0
29001	HUGHSON/HUNTER HAMILTON	56	38	45	60	75	124	206	270	71	63	6	1
29009	KENILWORTH HAMILTON	43	28	43	66	79	113	189	193	70	60	3	0
29011	BURLINGTON/LEEDS HAMILTON	57	49	76	91	129	200	266	330	113	99	22	1
29012	BURLINGTON/WELLINGTON HAMILTON	57	30	51	60	76	102	178	215	66	59	4	0
29017	CHATHAM/FRID HAMILTON	58	47	55	73	94	163	294	325	92	80	14	1
29025	BARTON/WENTWORTH HAMILTON	325	38	59	79	98	143	222	362	87	77	65	1
29067	450 HUGHSON ST N HAMILTON	50	29	36	46	61	75	108	113	50	46	0	0
29087	405 CUMBERLAND AV HAMILTON	57	27	36	53	68	86	191	220	59	51	5	0
29089	BARTON/NASH RD HAMILTON	50	28	39	56	68	104	148	189	61	53	1	0
29098	BAY/MAIN ST HAMILTON	55	26	37	50	65	109	171	174	60	51	5	0
29102	467 BEACH BLVD HAMILTON	319	32	49	73	100	138	235	322	81	69	56	1
29111	OFIELD RD/HWY 5 GREENSVILLE	59	42	62	90	122	189	325	393	107	89	18	1
29113	GERTRUDE/DEPEW HAMILTON	47	46	65	80	102	159	258	265	95	84	10	1
29114	VICKERS RD/EAST 18TH ST HAMILTON	56	24	40	54	66	100	177	178	63	53	5	0
29118	MAIN ST W/HWY 403 HAMILTON	56	28	40	51	62	91	201	223	59	51	4	0

TABLE A-23 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - TOTAL SUSPENDED PARTICULATE UNIT - MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	NO OF TIMES ABOVE CRITERIA 24-HR	1-YR
29119	MORLEY ST/PARKDALE AV HAMILTON	56	60	86	99	131	190	393	489	122	106	20	1
29122	DUNDURN/YORK HAMILTON	54	25	36	45	57	79	152	225	50	43	1	0
29128	LYNBROOK DR/ROLSTON HAMILTON	20	30	45	50	72	90	104	105	58	53	0	INS
29130	EWEN RD/WHITNEY AV HAMILTON	48	26	32	39	51	75	100	108	45	40	0	0
29135	ALBRIGHT RD/MT ALBION RD HAMILTON	46	25	36	41	54	74	120	154	48	43	1	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	333	29	40	52	65	101	182	327	61	53	16	0
31058	MOSLEY/LESLIE STS TORONTO	341	38	57	71	94	148	253	348	84	73	64	1
31082	WORKS DEPT, 138 HAMILTON AV TORONTO	337	35	50	64	83	131	226	274	74	65	43	1
31085	TECUMSETH/NIAGARA ST TORONTO	347	34	51	63	79	111	158	214	68	62	22	1
31104	26 BREADALBANE TORONTO	346	28	42	52	69	96	141	192	59	52	14	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	24	35	43	56	78	169	181	50	44	3	0
31126	969 EASTERN AV TORONTO	170	34	44	56	74	98	204	235	66	58	12	0
31181	60 BATHURST ST TORONTO	319	32	45	60	75	116	162	243	67	59	25	0
33003	LAWRENCE/KENNEDY SCARBORO	117	28	44	53	69	96	155	212	59	53	4	0
33019	REDLAND CR (SCARB BLUFFS) SCARBORO	105	22	30	37	48	70	103	137	43	38	1	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	114	22	33	41	52	67	126	203	46	40	2	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	115	20	40	52	74	114	215	300	65	51	10	0
35005	QUEENSWAY HOSPITAL ETOBICOKE	116	31	46	60	73	105	204	219	65	58	8	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	35	49	60	75	105	192	240	69	62	7	1
35051	RESOURCES RD (MOL LAB) ETOBICOKE	326	27	40	50	61	90	138	201	55	49	8	0
44005	2487 LAKESHORE E/BIRKBANK RDS OAKVILLE	253	18	29	38	51	76	122	177	44	38	3	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	116	26	39	51	71	93	121	124	56	50	2	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	112	25	35	44	58	85	134	144	51	45	3	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	293	18	35	49	77	113	204	257	60	44	23	0
45025	PS, RITSON RD/OLIVE AV OSHAWA	113	28	41	50	63	83	161	244	57	51	5	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	47	23	42	71	97	155	262	269	82	63	10	1

TABLE A-23 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - TOTAL SUSPENDED PARTICULATE UNIT - MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	NO OF TIMES ABOVE CRITERIA 24-HR	1-YR
46041	2414 DIXIE RD MISSISSAUGA	335	39	58	77	98	137	212	286	84	75	55	1
46045	2365 DIXIE RD MISSISSAUGA	327	36	51	66	81	113	190	280	72	64	23	1
46046	2360 DIXIE RD MISSISSAUGA	335	36	53	68	87	118	178	284	74	66	31	1
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	114	32	44	57	68	101	178	188	62	56	6	0
47019	POST OFFICE, 17-25 PETER ST S ORILLIA	44	18	30	47	59	77	112	130	48	41	1	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	69	21	28	38	50	68	90	91	41	37	0	0
48002	HWY47/E OF HWY48 STOUFFVILLE	113	18	34	41	53	76	123	159	47	40	2	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	18	19	29	47	69	80	105	109	50	42	0	INS
62013	WEATHER STN ATIKOKAN	58	13	17	23	37	53	152	181	33	26	2	0
62030	PORTAGE/CHURCH ST FORT FRANCES	51	26	40	56	85	134	201	259	78	62	12	1
62032	CEMETERY,COLONIZATION RD W FORT FRANCES	57	15	20	25	41	61	102	112	34	29	0	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	19	27	35	46	65	87	87	40	35	0	0
63012	DAWSON CT/ALGOMA ST N THUNDER BAY	58	15	21	32	43	72	94	119	37	30	0	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	58	20	25	31	45	74	88	89	39	34	0	0
63046	CAN-CAR, MONTREAL ST THUNDER BAY	56	26	43	61	83	120	196	226	69	58	6	0
63052	TRNSIT MAINT BD, WILLIAM RD THUNDER BAY	59	22	30	40	61	77	119	130	47	41	1	0
63200	MTC 615 JAMES ST S THUNDER BAY	56	15	25	31	47	65	91	103	37	32	0	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	46	21	38	50	92	200	254	261	82	60	11	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	52	20	29	34	43	61	83	97	38	35	0	0
71065	HOSPITAL, LAKESHORE AV BLIND RIVER	47	13	21	26	32	40	55	64	27	24	0	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	84	19	28	37	54	91	125	159	46	39	1	0
71071	BOUNDRY RD/BENNET SAULT STE MARIE	93	16	23	31	40	64	89	94	35	31	0	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	74	19	34	43	58	90	115	118	49	42	0	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	22	31	39	55	92	128	135	48	42	1	INS
75010	OPP STN NORTH BAY	69	13	21	27	36	64	87	89	33	28	0	0
75032	N.C.GAS PUMP STATION, HWY17 NORTH BAY	44	18	24	30	39	49	86	89	34	30	0	0

TABLE A-23 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - TOTAL SUSPENDED PARTICULATE UNIT - MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	NO OF TIMES ABOVE CRITERIA 24-HR	1-YR
77016	WATER TANK, ASH ST SUDBURY	56	14	22	30	39	61	125	205	37	31	1	0
77026	19 LISGAR ST SUDBURY	53	18	24	33	47	77	174	235	44	35	2	0
77029	POST OFFICE, SPRUCE/BARBER ST ESPANOLA	58	21	30	38	57	77	125	175	47	40	1	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	55	16	23	29	45	62	202	357	42	33	2	0
77214	EXECOTEL HOTEL (FRONT) ESPANOLA	250	18	31	43	56	80	128	154	46	39	4	0
77215	EXECOTEL HOTEL ESPANOLA	131	16	28	39	52	75	142	232	45	37	3	0

TABLE A-24 10-YEAR TREND FOR TSP

Annual Geometric Mean (ug/m3)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
ATIKOKAN	28	36	39	26	20	21	23	23	22	26
BRAMALEA	57	67	60	53	61	65	66	62	59	63
CHATHAM	77	70	75	65	48	45	41	43	45	51
ETOBICOKE	71	84	83	91	74	53	59	58	61	62
FORT FRANCES	31	39	40	39	32	33	32	26	29	29
HAMILTON	102	100	88	72	81	75	81	71	76	77
KITCHENER	68	80	64	64	54	51	58	46	56	61
LONDON	72	76	83	58	51	52	55	42	50	65
MISSISSAUGA	58	70	70	73	62	60	68	55	53	56
NORTH BAY	-	34	46	37	34	33	37	25	29	28
NORTH YORK	42	52	48	44	43	38	39	40	40	40
OAKVILLE	43	47	62	50	45	40	47	43	43	45
ORILLIA	38	50	50	44	59	42	43	42	40	41
OSHAWA	47	62	58	54	47	42	44	41	43	51
PETERBOROUGH	42	59	52	39	42	46	42	39	36	42
PICKERING	70	64	49	50	48	41	47	49	47	44
S.S.MARIE	38	53	62	45	40	35	37	36	34	35
SARNIA	80	66	76	62	58	59	45	46	45	42
SCARBORO	59	70	70	59	57	51	60	53	55	53
ST CATHARINES	56	67	62	57	56	68	58	50	60	-
SUDBURY	32	37	42	40	34	28	28	26	29	31
THUNDER BAY	44	51	51	52	39	35	44	36	40	35
TORONTO	67	72	67	58	55	54	54	50	51	52
WINDSOR	79	80	77	69	62	53	50	50	61	58

TABLE A-25 LEAD (Pb) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - LEAD UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	1	1	1	1	1	6	20	1	1	0
12005	7730 RIVERSIDE DR E WINDSOR	60	1	1	1	1	1	2	2	1	1	0
12007	WRIGHT/WATER ST WINDSOR	52	1	1	1	1	2	2	3	1	1	0
12008	467 UNIVERSITY AV W WINDSOR	304	1	1	1	1	2	3	6	1	1	0
12009	9725 RIVERSIDE DR E LITTLE RIVER	59	1	1	1	1	2	2	3	1	0	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	1	1	1	1	1	1	2	0	0	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	57	1	1	1	1	2	2	3	1	1	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	1	1	1	1	1	3	3	1	1	0
12038	2885 HOWARD AV WINDSOR	55	1	1	2	2	3	6	8	2	2	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	1	1	2	2	3	7	10	2	2	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	1	1	1	1	2	2	3	1	1	0
12049	643 ALEXANDRINE WINDSOR	60	1	1	1	1	2	4	5	1	1	0
12051	604 CAPITOL/REMINGTON WINDSOR	56	1	1	1	2	2	4	4	1	1	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	1	1	1	1	1	2	2	1	1	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	1	1	1	1	1	1	4	0	0	0
14030	RR1 (W OF HOUSE) CORUNNA	59	1	1	1	1	1	1	1	0	0	0
14031	RR1 (W OF BARN) MOORETOWN	56	1	1	1	1	1	1	1	0	0	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	1	1	1	1	1	2	2	1	0	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	1	1	1	1	2	6	9	2	1	0
15003	362 DUNDAS ST LONDON	55	1	1	1	1	2	5	7	1	1	0
15008	EDGEWARE RD (NNW VARTA PLT) ST THOMAS	57	1	1	1	1	2	5	7	1	1	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	1	1	1	1	1	1	1	0	0	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	1	1	1	1	2	6	7	1	1	0
15015	951 COMMISSIONERS RD E LONDON	59	1	1	1	1	1	2	3	1	0	0
15016	801 COMMISSIONERS RD E LONDON	58	1	1	1	1	1	2	3	1	0	0
15017	8 MOUNTSFIELD DR LONDON	58	1	1	1	1	1	3	4	1	1	0

TABLE A-25 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - LEAD UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	1	1	1	1	1	5	17	1	0	0
26029	EDNA/FREDERICK STS KITCHENER	57	1	1	2	4	5	11	12	3	2	0
28028	EXHIBITION ST/CLARK ST GUELPH	57	1	1	1	1	1	2	3	0	0	0
29001	HUGHSON/HUNTER HAMILTON	54	1	1	1	1	2	4	4	1	1	0
29011	BURLINGTON/LEEDS HAMILTON	57	1	1	2	2	3	4	4	2	2	0
29012	BURLINGTON/WELLINGTON HAMILTON	57	1	1	1	1	2	3	3	1	1	0
29017	CHATHAM/FRID HAMILTON	58	1	1	1	1	2	3	3	1	1	0
29025	BARTON/WENTWORTH HAMILTON	54	1	1	2	2	3	8	12	2	2	0
29067	450 HUGHSON ST N HAMILTON	50	1	1	1	1	1	2	2	1	1	0
29102	467 BEACH BLVD HAMILTON	50	1	1	1	1	2	4	6	1	1	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	1	1	1	1	2	4	5	1	1	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	333	1	1	1	2	4	9	15	2	1	0
31058	MOSLEY/LESLIE STS TORONTO	341	2	3	6	12	28	77	387	12	6	13
31082	WORKS DEPT, 138 HAMILTON AV TORONTO	347	1	1	2	3	4	8	11	2	2	0
31085	TECUMSETH/NIAGARA ST TORONTO	347	2	3	5	7	15	34	49	7	5	0
31104	26 BREADALBANE TORONTO	346	1	1	1	1	2	3	16	1	1	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	1	1	1	1	2	3	7	1	1	0
31126	969 EASTERN AV TORONTO	207	1	1	1	2	4	8	23	2	1	0
31181	60 BATHURST ST TORONTO	319	1	1	2	3	6	12	21	3	2	0
33003	LAWRENCE/KENNEDY SCARBORO	115	1	1	1	2	2	4	5	1	1	0
33019	REDLAND CR (SCARB BLUFFS) SCARBORO	107	1	1	1	1	1	2	2	0	0	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	113	1	1	1	1	2	4	11	1	1	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	1	1	1	1	2	4	4	1	1	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	1	1	2	2	3	6	6	2	2	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	117	1	1	1	1	2	3	6	1	1	0
44015	BRONTE RD/HOBURN CRES OAKVILLE	113	1	1	1	1	2	3	4	1	1	0

TABLE A-25 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES B ANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - LEAD

UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	1	1	1	1	2	4	5	1	1	0
45025	PS, RITSON RD/OLIVE AV OSHAWA	112	1	1	1	1	3	5	10	1	1	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	49	1	1	1	2	3	6	9	1	1	0
46041	2414 DIXIE RD MISSISSAUGA	332	5	11	22	44	87	178	214	37	21	90
46045	2365 DIXIE RD MISSISSAUGA	327	1	4	7	13	31	83	106	12	6	12
46046	2360 DIXIE RD MISSISSAUGA	335	3	8	15	32	62	107	176	26	14	59
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	113	1	1	1	1	2	4	4	1	1	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	1	1	1	1	1	2	3	1	1	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	19	1	1	1	1	1	2	2	1	1	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	1	1	1	1	2	3	3	1	1	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	1	1	1	1	2	2	2	1	1	0
63200	MTC 615 JAMES ST S THUNDER BAY	56	1	1	1	1	2	2	3	1	1	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	1	1	1	1	1	2	2	0	0	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	1	1	1	1	2	2	3	1	1	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	79	1	1	1	1	2	4	9	1	1	0
71071	BOUNDRY RD/BENNET SAULT STE MARIE	86	1	1	1	1	1	2	2	1	1	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	70	1	1	1	1	2	2	2	1	1	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	1	1	1	1	2	3	4	1	1	0
75010	OPP STN NORTH BAY	39	1	1	1	1	2	3	3	1	1	0
77016	WATER TANK, ASH ST SUDBURY	54	1	1	1	1	2	4	4	1	1	0
77026	19 LISGAR ST SUDBURY	50	1	1	1	1	2	4	5	1	1	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	1	1	1	1	1	5	17	1	1	0

TABLE A-26 10-YEAR TREND FOR Pb

Annual Geometric mean (ug/m3)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
BRAMALEA	.6	.3	.2	.2	.3	.3	.2	.2	.2	.1
CHATHAM	.4	.3	.3	.2	.2	.2	.2	.1	.1	.1
ETOBICOKE	.5	.2	.1	.2	.3	.3	.2	.2	.2	.1
HAMILTON	.9	.6	.5	.6	.4	.4	.4	.3	.3	.2
LONDON	.6	.5	.4	.3	.3	.3	.3	.2	.1	.1
MISSISSAUGA	.5	.4	.3	.4	.3	.3	.3	.2	.2	.1
NORTH BAY	–	.2	.2	.2	.2	.2	.1	.1	.1	.1
NORTH YORK	.8	.6	.4	.4	.3	.3	.3	.2	.2	.1
OSHAWA	.4	.4	.3	.2	.2	.2	.2	.2	.1	.1
PETERBORO	.4	.3	.3	.3	.2	.2	.2	.2	.1	.1
PICKERING	.5	.5	–	.3	.3	.2	.2	.2	.1	.1
S.S. MARIE	.3	.4	.3	.2	.1	.2	.2	.2	.1	.1
SARNIA	.1	.2	.1	.1	.1	.2	.1	.1	.1	.0
SCARBORO	.4	.4	.3	.3	.3	.3	.4	.3	.2	.1
SUDBURY	.2	.1	.1	.2	.1	.1	.1	.1	.1	.1
THUNDER BAY	.2	.2	.1	.2	.2	.2	.2	.1	.1	.1
TORONTO	.6	.4	.3	.4	.2	.3	.3	.2	.2	.1
WINDSOR	.5	.3	.3	.2	.2	.2	.2	.2	.2	.1

TABLE A-27 COPPER (Cu) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - COPPER IN TOTAL SUSPENDED PARTICULATE UNIT - .01 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	7	11	17	21	28	45	50	18	15	0
12005	7730 RIVERSIDE DR E WINDSOR	60	2	3	3	4	7	13	13	4	3	0
12008	467 UNIVERSITY AV W WINDSOR	304	5	8	12	18	39	58	260	17	13	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	2	3	5	6	8	12	13	5	4	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	9	13	18	22	34	44	45	19	16	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	6	8	11	12	15	23	28	11	10	0
12038	2885 HOWARD AV WINDSOR	54	21	30	36	45	49	57	57	36	33	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	6	10	11	15	22	34	36	13	11	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	12	23	30	44	75	138	141	39	31	0
12049	643 ALEXANDRINE WINDSOR	59	4	7	12	15	27	63	79	15	11	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	8	11	14	19	28	36	37	17	15	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	6	12	20	27	45	78	97	23	17	0
14030	RR1 (W OF HOUSE) CORUNNA	59	3	4	5	8	13	16	17	7	5	0
14031	RR1 (W OF BARN) MOORETOWN	56	2	3	5	6	10	12	12	5	4	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	4	8	15	27	50	92	102	23	14	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	8	23	33	42	65	93	95	36	28	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	8	16	23	33	47	58	63	26	21	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	1	2	3	4	6	8	9	3	2	0
15015	951 COMMISSIONERS RD E LONDON	59	1	1	2	2	3	5	6	2	1	0
15016	801 COMMISSIONERS RD E LONDON	58	1	1	2	3	5	9	11	3	2	0
15017	8 MOUNTSFIELD DR LONDON	58	1	2	2	3	6	7	8	3	2	0
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	60	56	70	82	94	110	152	163	84	80	0
26029	EDNA/FREDERICK STS KITCHENER	57	3	5	7	10	15	24	25	9	7	0
29001	HUGHSON/HUNTER HAMILTON	54	3	6	7	9	11	29	60	8	7	0
29011	BURLINGTON/LEEDS HAMILTON	57	5	9	11	13	18	23	24	11	10	0
29012	BURLINGTON/WELLINGTON HAMILTON	57	4	6	8	9	10	15	16	8	7	0

TABLE A-27 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - COPPER IN TOTAL SUSPENDED PARTICULATE UNIT - .01 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
29017	CHATHAM/FRID HAMILTON	58	8	11	16	18	23	34	39	16	15	0
29025	BARTON/WENTWORTH HAMILTON	54	7	11	14	19	32	42	45	17	15	0
29067	450 HUGHSON ST N HAMILTON	49	4	7	11	12	15	26	31	10	9	0
29102	467 BEACH BLVD HAMILTON	50	5	8	11	15	20	40	40	13	10	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	3	4	5	6	9	13	13	5	5	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	6	9	12	17	25	35	41	14	12	0
31058	MOSLEY/LESLIE STS TORONTO	294	5	9	12	18	28	56	466	17	12	0
31104	26 BREADALBANE TORONTO	346	5	8	12	17	30	69	89	16	12	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	7	17	22	28	44	62	67	23	19	0
31126	969 EASTERN AV TORONTO	170	3	6	10	14	19	26	37	11	9	0
33003	LAWRENCE/KENNEDY SCARBORO	117	4	8	11	15	25	37	39	13	11	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	9	14	18	29	43	54	63	23	19	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	3	5	8	10	17	32	39	9	7	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	4	6	7	10	13	20	49	8	7	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	118	4	7	9	12	19	40	52	11	9	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	113	6	12	17	23	49	79	81	22	17	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	4	10	14	19	29	66	74	17	12	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	16	23	32	44	80	116	122	40	32	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	5	9	12	15	22	37	38	13	11	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	3	6	8	11	15	18	19	9	8	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	3	4	6	7	11	20	21	7	6	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	3	3	4	5	7	16	22	5	4	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	1	1	1	3	7	11	12	3	1	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	7	11	14	17	25	28	29	15	12	0
71068	WM. HERRIFIELD SCHOOL SAULT STE MARIE	79	3	4	6	8	13	31	65	8	6	0
71071	BOUNDRY RD/BENNET SAULT STE MARIE	86	5	13	21	30	53	63	66	24	18	0

TABLE A-27 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - COPPER IN TOTAL SUSPENDED PARTICULATE UNIT - .01 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
71072	FIRST AV/SECOND LINE SAULT STE MARIE	70	11	16	20	27	57	112	128	28	22	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	3	4	5	8	14	19	19	7	6	0
75010	OPP STN NORTH BAY	39	12	14	18	22	29	32	32	19	18	0
77016	WATER TANK, ASH ST SUDBURY	53	15	23	29	45	74	212	212	44	33	0
77026	19 LISGAR ST SUDBURY	50	5	9	19	29	55	133	158	26	17	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	15	25	35	53	74	310	758	56	36	0

TABLE A-28 10-YEAR TREND FOR Cu

Annual geometric mean (ug/m3)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
BRAMALEA	.72	.58	.49	.23	.12	.15	.18	.20	.21	.32
CHATHAM	.06	.05	.04	.10	.23	.18	.10	.11	.13	.15
ETOBICOKE	.22	.08	-	.23	.08	.12	.10	.16	.08	.07
HAMILTON	.40	.29	.19	.22	.23	.32	.30	.23	.15	.15
LONDON	.47	.26	.18	.30	.13	.33	.21	.16	.13	.28
MISSISSAUGA	.44	.20	.33	.37	.23	.14	.10	.08	.08	-
NORTH BAY	.03	.38	.43	.40	.38	.22	.20	.15	.13	.18
NORTH YORK	.19	.11	-	.11	.20	.16	.20	.22	.17	.19
OSHAWA	.10	.14	.08	.05	.10	.12	.11	.16	.14	-
PICKERING	.36	.30	-	.26	.20	.28	.23	.15	.13	.12
S.S.MARIE	.48	.65	.55	.20	.13	.26	.14	.16	.14	.12
SCARBORO	.12	.07	-	.08	.17	.20	.12	.09	.11	.11
SUDBURY	.18	.33	.48	.24	.24	.39	.30	.37	.37	.33
THUNDER BAY	.04	.06	.09	.11	.08	.18	.19	.19	.07	.06
TORONTO	.13	.17	-	.10	.12	.16	.15	.12	.11	.12
WINDSOR	.17	.07	.04	.02	.05	.05	.05	.09	.25	.15

TABLE A-29 IRON (Fe) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - IRON IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	6	10	14	23	35	58	68	19	15
12005	7730 RIVERSIDE DR E WINDSOR	60	3	5	7	12	25	32	35	11	8
12007	WRIGHT/WATER ST WINDSOR	51	8	14	23	37	82	126	137	35	23
12008	467 UNIVERSITY AV W WINDSOR	304	7	12	17	24	40	83	105	21	16
12010	SEWAGE STN, HANNING RD WINDSOR	52	2	4	6	9	17	24	27	8	6
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	8	17	39	85	117	366	459	64	35
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	11	19	29	42	68	106	132	35	28
12016	COLLEGE/SOUTH ST WINDSOR	59	7	11	20	26	54	97	112	25	19
12038	2885 HOWARD AV WINDSOR	54	15	24	46	83	173	355	425	75	46
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	10	15	21	28	40	76	84	25	20
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	5	8	11	17	31	41	42	15	12
12049	643 ALEXANDRINE WINDSOR	59	7	9	18	28	40	70	108	22	17
12051	604 CAPITOL/REMINGTON WINDSOR	56	6	11	19	32	52	73	83	25	18
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	4	6	7	9	14	17	18	8	7
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	1	3	4	6	9	18	23	5	4
14030	RR1 (W OF HOUSE) CORUNNA	61	1	2	4	5	8	15	25	4	3
14031	RR1 (W OF BARN) MOORETOWN	58	1	2	3	5	7	13	23	4	3
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	2	3	5	7	8	17	26	5	4
14152	CHRISTINA/EXMOUTH ST SARNIA	87	5	9	11	16	38	122	126	18	12
14153	704 MARA ST POINT EDWARD SARNIA	81	3	4	7	13	27	50	55	11	7
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	3	5	8	12	17	55	68	11	8
15009	LONGWOODS CONSERVATION AUTHORITY	111	1	2	3	4	7	22	58	4	3
15014	POND MILLS RD/DEVERON CRES LONDON	60	1	4	7	8	13	39	59	8	5
15015	951 COMMISSIONERS RD E LONDON	59	1	3	5	7	10	24	33	6	4
15016	801 COMMISSIONERS RD E LONDON	58	1	2	4	8	11	33	58	7	4
15017	8 HOUNTSFIELD DR LONDON	58	1	3	6	8	12	43	51	7	5

TABLE A-29 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - IRON IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
17022	182 WATER ST WINGHAM	30	3	5	8	12	25	78	83	14	8
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	8	16	25	35	106	223	262	39	25
26029	EDNA/FREDERICK STS KITCHENER	57	2	5	8	12	17	39	48	9	6
29001	HUGHSON/HUNTER HAMILTON	54	4	9	13	24	59	129	131	26	15
29011	BURLINGTON/LEEDS HAMILTON	57	15	29	54	80	160	284	325	73	50
29012	BURLINGTON/WELLINGTON HAMILTON	57	5	8	13	21	47	98	105	22	13
29017	CHATHAM/FRID HAMILTON	58	8	14	22	38	72	207	306	37	23
29025	BARTON/WENTWORTH HAMILTON	54	7	13	23	41	85	287	296	44	25
29067	450 HUGHSON ST N HAMILTON	49	4	6	9	14	26	55	78	13	9
29102	467 BEACH BLVD HAMILTON	50	9	17	34	53	86	200	203	45	30
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	2	6	11	27	52	164	221	25	12
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	3	7	9	13	23	44	73	12	9
31058	MOSLEY/LESLIE STS TORONTO	293	5	10	15	23	43	113	168	22	15
31104	26 BREADALBANE TORONTO	346	3	7	9	13	20	31	56	11	8
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	3	6	8	11	15	33	52	9	7
31126	969 EASTERN AV TORONTO	171	3	7	10	15	28	70	78	14	9
33003	LAWRENCE/KENNEDY SCARBORO	117	3	6	8	11	15	35	55	9	7
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	3	5	6	9	13	62	110	9	6
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	2	5	9	13	28	65	106	13	8
35033	EVANS/ARNOLD AV ETOBICOKE	118	4	7	10	12	19	43	76	11	9
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	119	3	5	8	12	21	41	51	11	8
44015	BRONTE RD/WOBURN CRES OAKVILLE	114	3	5	7	9	15	25	28	8	7
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	2	5	8	13	24	57	162	12	7
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	2	6	12	19	32	52	58	15	10
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	1	3	4	7	11	15	15	5	4
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	2	4	5	9	13	18	20	7	5

TABLE A-29 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - IRON IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	3	10	13	20	27	36	38	15	10
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	2	7	9	14	27	49	60	13	9
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	13	23	38	71	198	395	464	78	46
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	5	9	12	16	29	52	60	15	11
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	79	3	6	10	19	37	138	151	20	11
71071	BOUNDRY RD/BENNET SAULT STE MARIE	86	1	3	5	7	14	23	30	6	4
71072	FIRST AV/SECOND LINE SAULT STE MARIE	70	3	6	9	12	23	34	35	11	8
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	1	4	7	10	21	39	47	10	6
75010	OPP STN NORTH BAY	39	1	3	4	6	14	22	27	6	4
77016	WATER TANK, ASH ST SUDBURY	53	3	6	8	16	28	169	323	18	9
77026	19 LISGAR ST SUDBURY	50	3	5	8	12	23	125	296	16	8
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	4	8	11	15	26	225	535	24	11

TABLE A-30 10-YEAR TREND FOR Fe

Annual geometric mean (ug/m3)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
BRAMALEA	1.0	1.1	.9	.4	.6	1.1	.5	.8	.5	1.0
CHATHAM	1.4	.9	1.1	.8	.6	.7	.5	.6	.5	.7
ETOBICOKE	1.3	1.5	-	1.1	.7	.7	.8	.8	.7	.8
HAMILTON	2.9	2.9	2.6	2.3	2.5	2.2	2.3	1.9	2.8	2.5
LONDON	1.3	1.4	1.0	.7	.5	.6	.6	.5	.4	.8
MISSISSAUGA	1.0	1.2	1.2	1.2	.8	.9	.9	.8	.5	-
NORTH YORK	.8	.3	-	.4	.4	.4	.5	.5	.4	.6
NORTH BAY	1.2	.2	.6	.4	.5	.2	.3	.3	.1	.4
OSHAWA	.9	.8	1.4	.4	.6	.5	.4	.7	.5	-
PICKERING	1.1	1.0	-	.5	.5	.5	.6	.6	.5	.7
S.S.MARIE	1.1	1.5	1.9	1.2	.5	.5	.7	1.2	.5	1.1
SCARBORO	.9	.8	-	.6	.5	.6	.7	.7	.5	.7
SUDBURY	1.2	.6	.9	1.0	.7	.7	.5	.6	.5	.9
THUNDER BAY	1.3	1.6	1.3	1.0	1.0	.9	1.2	.8	1.0	1.0
TORONTO	1.0	.8	.6	.9	.7	.8	.8	.7	.6	.8
WINDSOR	2.5	1.7	1.2	1.4	1.2	1.1	1.1	1.0	1.0	1.5

TABLE A-31 MANGANESE (Mn) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - MANGANESE IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	20	40	55	85	125	171	200	65	53	0
12005	7730 RIVERSIDE DR E WINDSOR	60	12	20	30	50	80	135	160	41	31	0
12008	467 UNIVERSITY AV W WINDSOR	304	30	46	63	90	140	249	380	78	64	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	10	16	30	40	60	83	100	30	23	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	26	61	135	349	540	881	910	224	119	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	54	34	65	86	130	220	318	340	111	88	0
12038	2885 HOWARD AV WINDSOR	54	31	52	91	140	224	437	470	117	87	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	30	49	61	90	110	168	180	70	61	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	20	30	40	51	100	124	140	49	41	0
12049	643 ALEXANDRINE WINDSOR	59	18	30	50	66	100	149	200	55	45	0
12051	604 CAPITOL/REMINGTON WINDSOR	56	20	30	50	70	100	144	150	56	45	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	10	20	20	30	40	60	60	25	22	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	4	10	10	20	30	60	200	15	12	0
14030	RR1 (W OF HOUSE) CORUNNA	59	4	10	10	20	22	47	60	14	11	0
14031	RR1 (W OF BARN) MOORETOWN	56	3	8	10	10	20	33	60	11	9	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	5	10	20	30	60	135	160	28	18	0
14152	CHRISTINA/EXMOUTH ST SARNIA	87	20	40	50	70	234	774	800	101	59	0
14153	704 MARA ST POINT EDWARD SARNIA	81	10	20	30	50	140	688	980	77	34	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	58	18	21	35	40	79	173	210	42	33	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	5	10	10	20	30	66	130	16	12	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	9	20	30	40	60	120	120	33	25	0
15015	951 COMMISSIONERS RD E LONDON	59	5	13	20	30	40	68	80	25	20	0
15016	801 COMMISSIONERS RD E LONDON	58	5	15	20	30	50	98	110	28	21	0
15017	8 MOUNTSFIELD DR LONDON	59	5	17	28	36	50	90	100	27	21	0
17022	182 WATER ST WINGHAM	30	10	27	50	93	151	596	640	93	49	0
18014	369 LEOPOLD ST WINGHAM	24	2	10	20	41	107	128	130	40	19	0

TABLE A-31 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - MANGANESE IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	40	62	90	127	300	540	600	131	93	0
26029	EDNA/FREDERICK STS KITCHENER	57	17	22	40	72	100	169	180	53	40	0
29001	HUGHSON/HUNTER HAMILTON	54	28	50	95	141	388	653	680	150	93	0
29011	BURLINGTON/LEEDS HAMILTON	57	140	200	350	462	767	1386	1840	410	318	0
29012	BURLINGTON/WELLINGTON HAMILTON	57	47	69	100	154	323	804	810	155	107	0
29017	CHATHAM/FRID HAMILTON	58	40	80	125	180	369	613	630	168	121	0
29025	BARTON/WENTWORTH HAMILTON	54	50	90	130	271	511	3711	5290	345	157	0
29067	450 HUGHSON ST N HAMILTON	49	25	40	50	85	175	519	660	93	56	0
29102	467 BEACH BLVD HAMILTON	50	59	100	210	320	520	1187	1400	275	182	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	11	30	65	181	238	703	900	124	62	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	16	30	40	50	100	149	200	48	37	0
31058	MOSLEY/LESLIE STS TORONTO	294	22	41	60	94	131	200	300	72	58	0
31104	26 BREADALBANE TORONTO	346	20	30	43	60	80	131	190	50	41	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	17	30	40	50	100	109	130	44	36	0
31126	969 EASTERN AV TORONTO	171	15	31	43	53	100	153	200	51	40	0
33003	LAWRENCE/KENNEDY SCARBORO	117	20	30	50	60	100	148	150	51	43	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	18	28	40	50	100	127	200	45	36	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	10	30	50	70	100	167	260	55	40	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	30	50	60	71	100	180	600	69	58	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	118	30	40	58	80	120	303	360	74	59	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	113	12	28	40	50	90	130	170	46	33	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	10	20	40	50	100	200	400	47	34	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	15	35	50	85	145	236	260	70	49	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	5	18	22	50	50	00	100	32	24	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	10	10	28	30	42	68	70	26	20	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	10	2	30	50	70	102	120	36	27	0

TABLE A-31 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - MANGANESE IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	7	19	20	37	70	113	130	32	23	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	50	120	200	430	610	854	900	289	178	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	25	40	60	83	141	219	250	72	58	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	79	20	40	65	120	263	609	640	116	70	0
71071	BOUNDRY RD/BENNET SAULT STE MARIE	86	10	20	20	30	66	123	140	31	24	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	70	20	40	56	83	133	273	490	72	50	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	10	14	20	30	40	74	80	25	20	0
75010	OPP STN NORTH BAY	39	5	10	17	20	40	69	84	20	16	0
77016	WATER TANK, ASH ST SUDBURY	53	5	10	10	20	30	74	130	17	13	0
77026	19 LISGAR ST SUDBURY	50	9	11	20	27	50	106	140	25	19	0

TABLE A-32 NICKEL (Ni) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - NICKEL IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	1	5	5	10	10	49	90	8	5	0
12005	7730 RIVERSIDE DR E WINDSOR	60	1	5	5	5	10	23	80	6	4	0
12008	467 UNIVERSITY AV W WINDSOR	304	2	5	10	10	10	79	120	10	7	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	1	5	5	5	10	17	30	6	4	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	1	5	10	10	27	35	40	12	7	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	1	5	10	10	10	14	20	8	6	0
12038	2885 HOWARD AV WINDSOR	54	1	5	10	10	20	45	70	9	6	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	1	5	5	10	10	10	10	6	5	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	3	5	5	7	10	10	10	6	5	0
12049	643 ALEXANDRINE WINDSOR	59	1	5	5	8	10	10	10	6	4	0
12051	604 CAPITOL/REMINGTON WINDSOR	56	1	5	5	10	10	10	10	6	4	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	1	5	5	5	10	10	10	5	4	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	1	5	5	6	19	40	80	8	5	0
14030	RR1 (W OF HOUSE) CORUNNA	59	1	5	5	5	10	10	10	5	4	0
14031	RR1 (W OF BARN) MOORETOWN	56	1	5	5	5	10	20	30	6	5	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	2	5	5	10	20	31	40	8	6	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	1	5	5	5	10	10	10	5	4	0
15009	LONGWOODS CONSERVATION AUTHORITY	115	1	5	5	5	5	10	11	4	4	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	1	5	5	5	10	20	20	5	4	0
15015	951 COMMISSIONERS RD E LONDON	59	1	5	5	10	18	50	50	9	5	0
15016	801 COMMISSIONERS RD E LONDON	58	1	5	5	5	9	10	10	5	4	0
15017	8 MOUNTSFIELD DR LONDON	58	1	5	5	5	5	10	10	4	4	0
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	1	5	5	5	10	13	20	5	4	0
26029	EDNA/FREDERICK STS KITCHENER	57	1	5	5	5	5	10	10	4	3	0
27047	DAVIS/FRAZER PORT COLBORNE	50	10	20	35	50	224	1202	1640	112	33	0
29001	HUGHSON/HUNTER HAMILTON	54	1	5	5	5	10	14	20	5	4	0

TABLE A-32 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - NICKEL IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
29011	BURLINGTON/LEEDS HAMILTON	57	1	5	5	10	10	24	30	8	6	0
29012	BURLINGTON/WELLINGTON HAMILTON	57	1	5	5	5	10	14	20	5	4	0
29017	CHATHAM/FRID HAMILTON	58	1	5	5	8	10	34	70	7	5	0
29025	BARTON/WENTWORTH HAMILTON	54	1	5	6	10	10	54	60	9	6	0
29067	450 HUGHSON ST N HAMILTON	49	1	5	5	5	10	10	10	5	4	0
29102	467 BEACH BLVD HAMILTON	50	1	5	5	10	11	28	40	8	5	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	1	5	5	5	27	101	120	12	6	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	2	5	5	5	10	23	33	6	5	0
31058	MOSLEY/LESLIE STS TORONTO	294	2	5	5	10	10	31	270	8	6	0
31104	26 BREADALBANE TORONTO	346	2	5	5	5	10	25	90	6	5	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	2	5	5	5	10	18	20	6	5	0
31126	969 EASTERN AV TORONTO	171	2	2	5	5	11	31	51	6	4	0
33003	LAWRENCE/KENNEDY SCARBORO	117	2	5	5	5	10	20	60	6	5	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	2	5	5	5	10	18	29	5	5	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	2	5	5	6	10	18	20	6	5	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	2	5	5	5	10	30	40	6	5	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	118	2	5	5	5	10	44	210	7	5	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	113	2	5	5	5	10	20	20	6	5	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	3	5	5	5	10	20	50	6	5	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	5	5	5	5	10	16	20	6	6	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	2	2	5	5	5	10	10	4	4	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	2	5	5	5	5	11	13	5	5	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	1	5	5	5	5	14	20	5	4	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	1	5	5	5	5	7	12	4	4	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	1	5	5	5	10	19	28	6	4	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	1	5	5	5	10	28	40	7	5	0

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - NICKEL IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

RUN DATE
JUL 08, 1988

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
71068	MH. MERRIFIELD SCHOOL SAULT STE MARIE	79	1	5	5	5	10	10	10	5	5	0
71071	BOUNDRY RD/BENNET SAULT STE MARIE	86	1	5	5	5	8	10	10	5	4	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	70	1	5	5	5	10	15	40	6	5	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	1	5	5	5	10	26	30	6	4	0
75010	OPP STN NORTH BAY	39	1	1	5	5	10	10	10	4	3	0
77016	WATER TANK, ASH ST SUDBURY	53	10	22	50	100	300	648	840	111	54	0
77026	19 LISGAR ST SUDBURY	50	10	20	30	79	175	668	850	85	38	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	60	99	145	241	477	749	770	217	157	0

TABLE A-33 CHROMIUM (Cr) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - CHROMIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	55	4	5	10	10	15	20	21	9	8	0
12005	7730 RIVERSIDE DR E WINDSOR	60	4	5	5	10	10	11	11	7	6	0
12008	467 UNIVERSITY AV W WINDSOR	304	4	5	10	10	20	40	60	11	9	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	4	5	5	9	10	19	19	7	6	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	8	12	20	30	53	184	240	32	21	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	5	10	10	20	30	40	40	15	12	0
12038	2885 HOWARD AV WINDSOR	54	5	5	10	10	20	52	70	12	9	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	5	5	5	10	14	24	24	8	7	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	2	5	5	6	10	20	20	6	5	0
12049	643 ALEXANDRINE WINDSOR	59	3	5	5	10	15	20	20	8	7	0
12051	604 CAPITOL/REMINGTON WINDSOR	56	3	5	5	10	10	16	20	7	6	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	3	5	9	10	20	30	30	10	8	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	3	5	5	7	10	20	20	6	5	0
14030	RR1 (W OF HOUSE) CORUNNA	59	3	5	5	5	11	20	20	7	6	0
14031	RR1 (W OF BARN) MOORETOWN	56	3	5	5	5	10	12	15	6	5	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	3	5	5	5	10	10	10	5	5	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	4	5	10	10	20	30	30	10	8	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	3	5	5	8	10	12	13	6	6	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	4	5	10	10	10	20	20	9	8	0
15015	951 COMMISSIONERS RD E LONDON	59	4	5	5	10	10	14	20	7	6	0
15016	801 COMMISSIONERS RD E LONDON	58	4	5	5	10	10	20	20	8	7	0
15017	8 MOUNTSFIELD DR LONDON	58	4	5	5	10	10	10	10	7	6	0
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	4	5	5	10	10	17	20	7	6	0
26029	EDNA/FREDERICK STS KITCHENER	57	4	5	10	10	15	34	40	9	8	0
29001	HUGHSON/HUNTER HAMILTON	54	4	5	10	10	30	40	40	12	9	0
29011	BURLINGTON/LEEDS HAMILTON	57	10	20	30	40	60	96	120	32	26	0

TABLE A-33 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - CHROMIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
29012	BURLINGTON/WELLINGTON HAMILTON	57	4	5	10	20	20	30	30	13	10	0
29017	CHATHAM/FRID HAMILTON	58	4	5	10	10	22	77	110	13	9	0
29025	BARTON/WENTWORTH HAMILTON	54	4	9	10	20	50	139	200	23	13	0
29067	450 HUGHSON ST N HAMILTON	47	5	10	14	20	30	30	30	16	13	0
29102	467 BEACH BLVD HAMILTON	50	4	10	10	20	30	60	60	16	12	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	4	5	13	24	40	51	60	18	12	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	4	10	10	18	30	40	50	13	11	0
31058	MOSLEY/LESLIE STS TORONTO	294	4	5	10	20	30	50	470	15	11	0
31104	26 BREADALBANE TORONTO	346	4	5	5	10	13	26	70	8	7	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	4	5	5	10	10	28	30	8	7	0
31126	969 EASTERN AV TORONTO	171	4	4	9	11	20	40	40	10	8	0
33003	LAWRENCE/KENNEDY SCARBORO	117	4	5	5	10	10	26	50	8	7	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	4	5	5	5	10	10	34	6	5	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	117	4	5	5	10	20	20	30	9	8	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	4	5	5	5	10	18	20	6	6	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	118	4	5	10	10	10	20	30	8	8	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	113	4	5	5	10	11	20	20	7	7	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	3	5	5	10	20	40	70	8	6	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	5	5	5	5	10	27	30	7	6	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	4	4	5	5	5	10	10	5	5	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	4	5	5	5	5	22	31	6	5	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	5	5	5	5	7	11	11	5	5	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	4	5	5	5	8	16	25	6	5	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	11	4	10	13	15	32	36	36	16	13	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	14	4	4	4	10	14	18	19	8	7	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	10	4	4	4	4	5	13	14	5	5	0

TABLE A-33 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - CHROMIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
71071	BOUNDRY RD/BENNET SAULT STE MARIE	20	4	4	4	4	13	15	15	6	5	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	15	4	4	4	10	12	18	19	7	6	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	15	4	4	4	8	12	15	15	7	6	0
75010	OPP STN NORTH BAY	39	4	4	5	5	10	20	20	6	6	0
77016	WATER TANK, ASH ST SUDBURY	53	4	5	5	9	12	34	60	8	6	0
77026	19 LISGAR ST SUDBURY	50	4	5	5	10	15	45	50	9	7	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	4	5	5	5	10	39	80	8	6	0

TABLE A-34 CADMIUM (Cd) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE JUL 08, 1988

YEAR - 1987 POLLUTANT - CADMIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	1	1	2	3	7	22	27	4	2	0
12005	7730 RIVERSIDE DR E WINDSOR	60	1	1	1	2	4	6	7	1	1	0
12008	467 UNIVERSITY AV W WINDSOR	304	1	1	2	4	9	25	42	4	2	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	1	1	1	1	2	3	4	1	1	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	1	1	2	3	5	14	15	3	2	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	1	1	2	3	8	17	20	3	1	0
12038	2885 HOWARD AV WINDSOR	54	1	1	1	2	3	8	10	2	1	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	1	1	1	2	3	8	10	2	1	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	1	1	2	2	3	4	4	2	1	0
12049	643 ALEXANDRINE WINDSOR	59	1	1	1	2	3	6	7	1	1	0
12051	604 CAPITOL/REMINGTON WINDSOR	56	1	1	1	1	3	5	6	1	1	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	1	1	1	2	3	4	4	1	1	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	1	1	1	2	2	4	7	1	1	0
14030	RR1 (W OF HOUSE) CORUNNA	59	1	1	1	1	1	2	2	0	0	0
14031	RR1 (W OF BARN) MOORETOWN	56	1	1	1	1	1	1	2	0	0	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	1	1	1	1	3	3	4	1	1	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	1	1	1	1	4	6	8	1	1	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	1	1	1	1	2	4	20	1	0	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	1	1	1	1	3	3	3	1	0	0
15015	951 COMMISSIONERS RD E LONDON	59	1	1	1	1	2	3	3	1	0	0
15016	801 COMMISSIONERS RD E LONDON	58	1	1	1	1	1	2	3	0	0	0
15017	8 MOUNTSFIELD DR LONDON	58	1	1	1	1	1	3	3	0	0	0
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	1	1	1	1	2	6	8	1	0	0
26029	EDNA/FREDERICK STS KITCHENER	57	1	1	1	1	2	3	3	1	0	0
29001	HUGHSON/HUNTER HAMILTON	54	1	1	1	1	3	9	12	1	1	0
29011	BURLINGTON/LEEDS HAMILTON	57	1	1	1	3	4	6	7	2	1	0

TABLE A-34 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - CADMIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
29012	BURLINGTON/WELLINGTON HAMILTON	57	1	1	1	1	3	8	9	1	1	0
29017	CHATHAM/FRID HAMILTON	58	1	1	1	1	1	4	6	1	0	0
29025	BARTON/WENTWORTH HAMILTON	54	1	1	1	3	5	12	13	2	1	0
29067	450 HUGHSON ST N HAMILTON	49	1	1	1	2	3	5	7	1	1	0
29102	467 BEACH BLVD HAMILTON	50	1	1	1	2	4	6	7	2	1	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	1	1	1	1	4	6	7	1	1	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	1	1	1	3	4	98	113	4	1	0
31058	MOSLEY/LESLIE STS TORONTO	294	1	2	3	4	10	88	352	7	2	0
31104	26 BREADALBANE TORONTO	346	1	1	1	2	4	21	100	2	1	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	1	1	1	2	4	6	6	1	1	0
31126	969 EASTERN AV TORONTO	171	1	1	3	3	5	84	121	5	2	0
33003	LAWRENCE/KENNEDY SCARBORO	117	1	1	1	2	3	6	7	1	1	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	1	1	1	2	4	7	10	2	1	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	1	1	1	2	4	5	11	1	1	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	1	1	1	3	5	14	41	2	1	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	119	1	1	1	2	3	4	5	1	1	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	114	1	3	5	6	12	41	240	8	4	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	1	1	1	1	3	5	21	1	0	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	1	1	1	1	2	5	6	1	1	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	1	1	1	1	3	4	4	1	1	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	1	1	1	1	1	4	4	0	0	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	1	1	1	1	1	3	3	0	0	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	1	1	1	1	2	2	3	1	0	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	11	1	1	1	1	3	3	3	1	1	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	13	1	1	1	2	3	3	3	2	1	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	10	2	3	3	3	4	4	4	3	3	0

TABLE A-34 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - CADMIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE RUN DATE JUL 08, 1988

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
71071	BOUNDRY RD/BENNET SAULT STE MARIE	20	3	3	3	4	4	4	4	3	3	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	15	3	3	3	4	4	5	5	3	3	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	15	1	1	2	2	2	3	3	2	1	0
75010	OPP STN NORTH BAY	39	1	1	1	1	2	2	2	1	0	0
77016	WATER TANK, ASH ST SUDBURY	53	1	1	1	2	7	14	15	2	1	0
77026	19 LISGAR ST SUDBURY	50	1	1	1	2	5	9	11	2	1	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	1	1	1	1	7	40	61	3	1	0

TABLE A-35 VANADIUM (V) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

YEAR - 1987 POLLUTANT - VANADIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

RUN DATE JUL 08, 1988

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	4	5	5	10	14	34	40	9	7	0
12005	7730 RIVERSIDE DR E WINDSOR	60	4	5	5	5	10	21	23	7	6	0
12008	467 UNIVERSITY AV W WINDSOR	304	4	5	5	10	20	50	70	9	7	0
12010	SEWAGE STN, HANNING RD WINDSOR	52	4	5	5	10	10	22	40	7	6	0
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	4	5	10	10	20	30	30	11	9	0
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	4	5	10	10	20	24	30	10	8	0
12038	2885 HOWARD AV WINDSOR	54	3	5	5	10	10	20	20	7	6	0
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	4	5	10	10	15	24	30	9	8	0
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	2	3	5	6	10	14	20	6	5	0
12049	643 ALEXANDRINE WINDSOR	59	3	5	5	10	20	34	40	9	7	0
12051	604 CAPITOL/REMINGTON WINDSOR	56	3	5	6	10	20	34	40	9	7	0
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	3	5	5	5	10	46	56	8	6	0
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	3	5	10	10	50	210	400	20	9	0
14030	RR1 (W OF HOUSE) CORUNNA	59	3	5	10	10	23	47	60	11	8	0
14031	RR1 (W OF BARN) MOORETOWN	56	3	5	10	19	35	52	54	15	10	0
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	3	5	10	20	30	78	90	16	10	0
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	4	5	5	5	10	20	20	7	6	0
15009	LONGWOODS CONSERVATION AUTHORITY	111	3	5	5	5	10	20	20	6	5	0
15014	POND MILLS RD/DEVERON CRES LONDON	60	4	5	5	10	20	30	30	9	8	0
15015	951 COMMISSIONERS RD E LONDON	59	4	5	5	8	10	20	20	7	6	0
15016	801 COMMISSIONERS RD E LONDON	58	4	5	5	10	20	24	30	8	7	0
15017	8 MOUNTSFIELD DR LONDON	58	4	5	5	5	10	20	20	7	6	0
22907	RAINHAM RD (NEAR STELCO GATE) NANTICOKE	59	4	5	10	10	22	50	50	12	9	0
26029	EDNA/FREDERICK STS KITCHENER	57	4	5	5	10	20	25	33	9	7	0
29001	HUGHSON/HUNTER HAMILTON	54	4	5	10	10	20	54	60	10	8	0
29011	BURLINGTON/LEEDS HAMILTON	57	4	5	10	13	34	75	100	15	10	0

TABLE A-35 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - VANADIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
29012	BURLINGTON/WELLINGTON HAMILTON	57	4	5	10	10	20	44	70	10	8	0
29017	CHATHAM/FRID HAMILTON	58	4	5	10	11	20	51	70	12	10	0
29025	BARTON/WENTWORTH HAMILTON	54	4	5	5	10	30	104	140	15	9	0
29067	450 HUGHSON ST N HAMILTON	49	4	5	5	10	20	25	30	8	7	0
29102	467 BEACH BLVD HAMILTON	50	4	5	5	10	20	35	40	9	7	0
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	4	5	5	10	20	57	90	11	7	0
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	4	5	5	10	20	40	70	9	7	0
31058	MOSLEY/LESLIE STS TORONTO	293	4	5	7	10	20	50	70	10	8	0
31104	26 BREADALBANE TORONTO	346	4	5	5	10	10	25	30	7	6	0
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	4	5	5	10	13	20	50	8	7	0
31126	969 EASTERN AV TORONTO	171	4	4	5	6	10	23	30	7	6	0
33003	LAWRENCE/KENNEDY SCARBORO	117	4	5	5	5	10	20	20	7	6	0
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	4	5	5	9	10	30	40	7	6	0
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	4	5	5	10	20	20	22	8	7	0
35033	EVANS/ARNOLD AV ETOBICOKE	118	4	5	5	10	10	20	60	7	6	0
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	118	4	5	5	5	10	18	20	6	6	0
44015	BRONTE RD/WOBURN CRES OAKVILLE	113	4	5	5	10	10	10	20	7	6	0
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	3	5	5	10	14	30	90	9	7	0
46033	FIRE HALL, BRAMALEA RD BRAMALEA	46	5	5	5	10	10	20	20	8	7	0
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	4	4	5	5	10	13	20	6	5	0
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	4	10	20	23	32	60	60	21	15	0
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	2	5	5	10	10	20	20	7	6	0
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	3	5	5	10	10	20	20	8	6	0
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	11	4	4	4	4	23	23	23	9	6	0
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	13	4	4	4	4	8	18	20	6	5	0
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	10	4	4	4	4	4	4	4	4	4	0

TABLE A-35 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - VANADIUM IN TOTAL SUSPENDED PARTICULATE UNIT - .001 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN	TIMES ABOVE CRITERIA 24-HR
71071	BOUNDRY RD/BENNET SAULT STE MARIE	20	4	4	4	4	4	4	4	4	4	0
71072	FIRST AV/SECOND LINE SAULT STE MARIE	15	4	4	4	4	4	4	4	4	4	0
72077	MINISTRY OF HEALTH BLDG TIMMINS	15	4	4	4	4	4	10	11	4	4	0
75010	OPP STN NORTH BAY	39	4	4	5	5	6	10	10	5	5	0
77016	WATER TANK, ASH ST SUDBURY	53	4	5	5	5	10	20	30	6	5	0
77026	19 LISGAR ST SUDBURY	50	4	5	5	5	10	25	40	7	6	0
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	4	5	5	5	10	27	60	7	6	0

TABLE A-36 MAXIMUM MONITORED LEVELS FOR TRACE METALS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08,1988

YEAR - 1987 POLLUTANTS - CHROMIUM IN TSP UNIT - .001 UG/M3; COBALT IN TSP UNIT - .01 UG/M3; VANADIUM IN TSP UNIT - .001 UG/M3; COPPER IN TSP UNIT - .01 UG/M3; NICKEL IN TSP UNIT - .001 UG/M3; IRON IN TSP UNIT - .1 UG/M3; CADMIUM IN TSP UNIT - .001 UG/M3; MANGANESE IN TSP UNIT - .001 UG/M3

STATION NUMBER	LOCATION	NO OF SAMPLES	CR MAX	CO MAX	VV MAX	CU MAX	FE MAX	NI MAX	CD MAX	MN MAX
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	21	1	40	50	68	90	27	200
12005	7730 RIVERSIDE DR E WINDSOR	60	11	2	23	13	35	80	7	160
12007	WRIGHT/WATER ST WINDSOR	52	N/A	N/A	N/A	N/A	137	N/A	N/A	N/A
12008	467 UNIVERSITY AV W WINDSOR	304	60	1	70	260	105	120	42	350
12010	SEWAGE STN, HANNING RD WINDSOR	52	19	10	40	13	27	30	4	100
12013	FILTRAT PLT,3665 WYANDOTTE ST E WINDSOR	58	240	10	30	45	459	40	15	910
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	40	2	30	28	132	20	20	340
12016	COLLEGE/SOUTH ST WINDSOR	59	N/A	N/A	N/A	N/A	112	N/A	N/A	N/A
12038	2885 HOWARD AV WINDSOR	54	70	1	20	57	425	70	10	470
12039	DOUGLAS ST/E.C ROW W WINDSOR	60	24	2	30	36	84	10	10	180
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	20	1	20	141	42	10	4	140
12049	643 ALEXANDRINE WINDSOR	59	20	1	40	79	108	10	7	200
12051	604 CAPITOL/REMINGTON WINDSOR	56	20	0	40	N/A	83	10	6	150
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	30	0	56	37	18	10	4	60
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	339	20	1	400	97	23	80	7	200
14030	RR1 (W OF HOUSE) CORUNNA	60	20	3	60	17	25	10	2	60
14031	RR1 (W OF BARN) MOORETOWN	56	15	2	54	12	23	30	2	60
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	10	2	90	102	26	40	4	160
14152	CHRISTINA/EXMOUTH ST SARNIA	87	N/A	N/A	N/A	N/A	126	N/A	N/A	800
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	30	0	20	95	68	10	8	210
15009	LONGWOODS CONSERVATION AUTHORITY	111	13	1	20	63	58	11	20	130
15014	POND MILLS RD/DEVERON CRES LONDON	60	20	N/A	30	9	59	20	3	120
15015	951 COMMISSIONERS RD. E LONDON	59	20	N/A	20	6	33	50	3	80
15016	801 COMMISSIONERS RD. E LONDON	58	20	N/A	30	11	58	10	3	110

TABLE A-36 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08,1988

YEAR - 1987 POLLUTANTS - CHROMIUM IN TSP UNIT - .001 UG/M3; NICKEL IN TSP UNIT - .001 UG/M3
COBALT IN TSP UNIT - .01 UG/M3; IRON IN TSP UNIT - .1 UG/M3
VANADIUM IN TSP UNIT - .001 UG/M3; CADMIUM IN TSP UNIT - .001 UG/M3
COPPER IN TSP UNIT - .01 UG/M3; MANGANESE IN TSP UNIT - .001 UG/M3

STATION NUMBER	LOCATION	NO OF SAMPLES	CR MAX	CO MAX	VV MAX	CU MAX	FE MAX	NI MAX	CD MAX	MN MAX
15017	8 MOUNTSFIELD DR. LONDON	58	10	N/A	20	8	51	10	3	100
17022	182 WATER ST WINGHAM	30	N/A	N/A	N/A	N/A	83	N/A	N/A	640
18014	369 LEOPOLD ST WINGHAM	24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	130
26029	EDNA/FREDERICK STS KITCHENER	57	40	2	33	25	48	10	3	53
27047	DAVIS/FRAZER PORT COLBORNE	50	N/A	N/A	N/A	N/A	N/A	1640	N/A	N/A
29001	HUGHSON/HUNTER HAMILTON	57	40	0	60	60	131	20	12	680
29011	BURLINGTON/LEEDS HAMILTON	57	120	1	100	24	325	30	7	1840
29012	BURLINGTON/WELLINGTON HAMILTON	57	30	0	70	16	105	20	9	810
29017	CHATHAM/FRID HAMILTON	58	110	1	70	39	306	70	6	630
29025	BARTON/WENTWORTH HAMILTON	54	200	0	140	45	296	60	13	5290
29067	450 HUGHSON ST N HAMILTON	49	30	10	30	31	78	10	7	660
29102	467 BEACH BLVD HAMILTON	50	60	0	40	40	203	40	7	1400
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	60	0	90	13	221	120	7	900
31045	BRUCE PS, 51 LARCHMOUNT AV TORONTO	283	50	0	70	41	73	33	113	200
31058	MOSLEY/LESLIE STS TORONTO	293	470	2	70	466	168	270	352	300
31104	26 BREADALBANE TORONTO	320	70	2	30	89	56	90	100	190
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	30	3	50	67	52	20	6	130
31126	969 EASTERN AVE. TORONTO	170	40	3	30	37	78	51	121	200
33003	LAWRENCE/KENNEDY SCARBORO	117	50	1	20	39	55	60	7	150
34002	SC CTR, 770 DON MILLS RD NORTH YORK	115	34	0	40	63	110	29	10	200
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	30	0	22	39	106	20	11	260
35033	EVANS/ARNOLD AV ETOBICOKE	118	20	0	60	49	76	40	41	600
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	117	30	1	20	52	51	210	5	360

TABLE A-36 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08,1988

YEAR - 1987 POLLUTANTS - CHROMIUM IN TSP UNIT - .001 UG/M3 NICKEL IN TSP UNIT - .001 UG/M3
COBALT IN TSP UNIT - .01 UG/M3 IRON IN TSP UNIT - .1 UG/M3
VANADIUM IN TSP UNIT - .001 UG/M3 CADMIUM IN TSP UNIT - .001 UG/M3
COPPER IN TSP UNIT - .01 UG/M3 MANGANESE IN TSP UNIT - .001 UG/M3

STATION NUMBER	LOCATION	NO OF SAMPLES	CR MAX	CO MAX	VV MAX	CU MAX	FE MAX	NI MAX	CD MAX	MN MAX
44015	BRONTE RD/WOBURN CRES OAKVILLE	119	20	1	20	81	28	20	240	170
45001	FIRE HALL, BAYLY/BROCK PICKERING	296	70	0	90	74	162	50	21	400
46033	FIRE HALL, BRAMALEA RD BRAMALEA	44	30	0	20	122	58	20	6	260
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	68	10	0	20	38	15	10	4	100
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	31	0	60	19	20	13	4	70
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	56	11	0	20	21	38	20	3	120
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	52	25	0	20	22	60	12	3	130
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	36	0	23	12	464	28	3	900
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	19	0	20	29	60	40	3	250
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	79	14	1	4	65	151	10	4	640
71071	BOUNDRY RD/BENNET SAULT STE MARIE	86	15	N/A	4	66	30	10	4	140
71072	FIRST AV/SECOND LINE SAULT STE MARIE	70	19	0	4	128	35	40	5	490
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	15	2	11	19	47	30	3	80
75010	OPP STN NORTH BAY	39	20	0	10	32	27	10	2	84
77016	WATER TANK, ASH ST SUDBURY	53	60	3	30	212	323	840	15	130
77026	19 LISGAR ST SUDBURY	50	50	2	10	158	296	850	11	140
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	54	80	2	60	758	535	770	61	N/A

TABLE A-37 NITRATE (NO_3^-) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - NITRATE IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
10015	PUC BLDG, 64 WEST ST GODERICH	52	2	11	25	41	82	134	138	36	18
12002	CITY HALL, 444 WINDSOR AV WINDSOR	51	16	40	49	65	88	122	130	53	44
12005	7730 RIVERSIDE DR E WINDSOR	55	16	32	47	57	77	101	102	47	40
12008	467 UNIVERSITY AV W WINDSOR	304	21	41	58	77	115	203	317	65	52
12009	9725 RIVERSIDE DR E LITTLE RIVER	59	14	32	46	61	113	162	180	54	41
12010	SEWAGE STN, HANNING RD WINDSOR	52	20	32	47	63	90	132	137	52	42
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	25	39	53	64	103	145	170	59	51
12038	2885 HOWARD AV WINDSOR	54	15	32	44	59	87	128	131	49	39
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	19	31	44	62	92	146	153	54	44
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	50	17	34	43	56	106	142	147	52	43
12049	643 ALEXANDRINE WINDSOR	59	14	30	39	54	86	140	146	46	37
12051	604 CAPITOL/REMINGTON WINDSOR	56	13	24	37	53	83	117	123	43	35
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	20	36	55	76	99	135	145	58	47
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	340	9	21	36	53	81	135	197	41	31
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	8	15	35	48	72	97	106	37	27
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	12	32	43	65	94	148	175	53	39
15003	362 DUNDAS ST LONDON	60	17	34	53	73	102	130	136	57	46
15014	POND MILLS RD/DEVERON CRES LONDON	60	12	31	43	57	92	123	142	49	39
15015	951 COMMISSIONERS RD E LONDON	59	11	34	53	66	96	116	129	52	39
15016	801 COMMISSIONERS RD E LONDON	57	13	28	47	59	90	113	115	49	37
15017	8 MOUNTSFIELD DR LONDON	58	12	30	46	65	83	123	124	49	38
22904	WALPOLE S PS, SANDUSK RD NANTICOKE	49	13	29	38	49	70	101	105	41	34
26029	EDNA/FREDERICK STS KITCHENER	49	10	16	36	52	93	111	115	42	32
27056	ALLENDALE AV NIAGARA FALLS	59	17	30	35	56	80	146	219	47	38
28028	EXHIBITION ST/CLARK ST GUELPH	57	10	18	37	58	90	129	139	44	32
29001	HUGHSON/HUNTER HAMILTON	57	16	30	44	60	91	137	161	50	41

TABLE A-37 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - NITRATE IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
29011	BURLINGTON/LEEDS HAMILTON	57	10	17	30	43	86	131	137	38	27
29012	BURLINGTON/WELLINGTON HAMILTON	53	12	19	32	51	85	116	120	41	31
29017	CHATHAM/FRID HAMILTON	51	14	22	37	54	88	121	129	44	35
29025	BARTON/WENTWORTH HAMILTON	54	13	27	41	64	123	171	176	55	39
29087	405 CUMBERLAND AV HAMILTON	57	13	23	34	51	88	133	145	43	32
29102	467 BEACH BLVD HAMILTON	51	8	21	37	54	99	166	197	48	30
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	23	34	55	69	86	120	125	55	47
31104	26 BREADALBANE TORONTO	320	11	23	35	60	99	144	158	47	33
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	115	10	20	33	50	83	153	167	42	31
33003	LAWRENCE/KENNEDY SCARBORO	102	10	18	29	51	82	142	152	39	28
33019	REDLAND CR (SCARB BLUFFS) SCARBORO	107	11	20	36	56	85	139	161	43	29
34002	SC CTR, 770 DON MILLS RD NORTH YORK	104	9	16	30	50	75	118	152	38	28
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	10	20	27	42	77	105	150	38	28
35005	QUEENSWAY HOSPITAL ETOBICOKE	116	12	21	33	55	87	170	192	45	34
35033	EVANS/ARNOLD AV ETOBICOKE	103	14	28	45	67	98	175	210	53	41
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	101	15	28	42	67	97	146	151	51	40
44015	BRONTE RD/WOBURN CRES OAKVILLE	112	13	21	31	47	79	107	127	40	31
45001	FIRE HALL, BAYLY/BROCK PICKERING	295	4	12	24	48	92	195	338	40	22
45025	PS, RITSON RD/OLIVE AV OSHAWA	113	11	21	36	61	104	168	209	48	32
46033	FIRE HALL, BRAMALEA RD BRAMALEA	49	11	21	30	52	106	180	237	46	33
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	114	11	20	27	46	83	127	153	39	29
47019	POST OFFICE, 17-25 PETER ST S ORILLIA	46	5	11	17	55	88	122	122	35	20
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	49	6	16	29	46	78	100	112	36	25
48002	HWY47/E OF HWY48 STOUFFVILLE	115	7	18	34	61	80	184	196	43	27
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	9	15	23	43	57	84	84	32	24
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	5	8	10	15	28	43	46	14	10

TABLE A-37 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - NITRATE IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	3	5	8	11	29	129	231	16	9
63200	MTC 615 JAMES ST S THUNDER BAY	56	3	5	9	13	26	56	86	12	8
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	41	3	5	8	15	28	44	45	13	8
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	2	6	9	21	33	52	66	15	9
71068	WM. MERRIFIELD SCHOOL SAULT STE MARIE	80	3	6	10	19	36	62	69	16	11
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	2	2	6	10	16	29	34	8	5
75010	OPP STN NORTH BAY	39	2	4	10	20	25	69	74	15	9
77016	WATER TANK, ASH ST SUDBURY	52	3	6	12	20	35	51	53	16	10
77026	19 LISGAR ST SUDBURY	49	4	9	13	22	37	59	62	18	13
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	51	2	6	8	15	35	45	46	13	8

TABLE A-38 10-YEAR TREND FOR NO_2

Annual geometric mean (ug/m3)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
BRAMALEA	2.9	3.8	2.9	3.0	4.3	3.8	3.8	3.6	3.7	3.3
CHATHAM	4.2	5.2	5.3	4.6	3.7	3.1	3.5	3.5	3.5	4.7
ETOBICOKE	4.3	4.1	4.6	4.9	4.9	3.3	3.7	3.0	3.8	2.8
HAMILTON	4.1	4.0	3.8	3.4	3.7	3.7	3.8	3.5	3.8	3.9
KITCHENER	-	4.1	3.7	3.4	3.7	3.1	3.3	2.8	3.3	3.2
LONDON	3.9	4.9	4.5	3.5	3.6	3.3	3.6	3.3	3.6	3.9
MISSISSAUGA	3.3	3.6	3.1	3.5	4.0	4.1	3.8	3.5	3.0	2.9
NORTH BAY	3.1	2.0	1.4	1.2	1.2	1.2	1.1	1.0	.9	.9
NORTH YORK	3.4	4.4	3.3	3.1	3.2	3.1	3.3	3.1	2.7	2.8
OSHAWA	-	4.3	3.2	3.3	3.2	3.0	3.5	2.9	3.0	3.2
PICKERING	3.5	3.1	2.5	2.7	2.7	2.0	2.4	2.4	2.2	2.2
S.S.MARIE	-	1.2	1.4	1.5	1.2	1.3	1.2	1.0	.9	.9
SCARBORO	3.1	3.6	3.4	3.0	3.3	3.2	3.6	3.2	3.1	2.8
SUDBURY	1.0	1.0	1.2	1.6	1.1	1.3	.9	.8	.6	1.0
THUNDER BAY	1.0	.7	1.2	1.5	1.2	.7	.9	.8	.9	1.0
TORONTO	3.8	4.2	3.7	3.7	3.8	3.6	3.5	3.5	3.4	3.3
WINDSOR	5.3	5.7	5.5	5.8	4.4	4.1	3.5	3.9	2.9	4.4

TABLE A-39 SULPHATE ($SO_4^{=}$) STATISTICS (1987)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - SULPHATE IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
10015	PUC BLDG, 64 WEST ST GODERICH	54	40	60	76	94	137	277	285	87	75
12002	CITY HALL, 444 WINDSOR AV WINDSOR	56	74	92	107	135	188	288	343	122	113
12005	7730 RIVERSIDE DR E WINDSOR	60	70	81	93	117	153	287	312	107	100
12008	467 UNIVERSITY AV W WINDSOR	304	86	105	120	152	204	359	919	139	127
12009	9725 RIVERSIDE DR E LITTLE RIVER	59	69	81	92	117	139	218	227	104	99
12010	SEWAGE STN, HANNING RD WINDSOR	52	70	84	94	125	183	283	307	113	104
12015	SEWAGE STN, HWY 18/PROSPECT WINDSOR	53	82	110	136	151	179	280	359	134	123
12038	2835 HOWARD AV WINDSOR	54	59	81	100	114	151	252	277	105	98
12039	DOUGLAS ST/E.C. ROW W WINDSOR	60	78	96	113	131	166	381	392	125	115
12047	DORWIN PLAZA, DOUGALL AV WINDSOR	52	60	83	102	127	190	309	358	115	103
12049	643 ALEXANDRINE WINDSOR	60	67	82	105	118	148	288	373	109	101
12051	604 CAPITOL/REMINGTON WINDSOR	56	58	73	89	103	124	224	332	93	88
13003	POST OFFICE, 10 CENTRE ST CHATHAM	54	66	81	98	111	134	183	184	100	95
14016	HWY40 (OPP LAMBTON GS) COURTRIGHT	340	43	73	92	112	151	250	420	97	86
14064	CENTENNIAL PK,FRONT ST/CN TRACKS SARNIA	59	40	57	80	104	127	176	181	83	73
15001	WRN FAIR GROUNDS, KING/RECTORY LONDON	57	60	80	95	111	143	244	246	101	94
15003	362 DUNDAS ST LONDON	60	64	77	95	116	162	264	285	106	98
15014	POND MILLS RD/DEVERON CRES LONDON	60	52	76	91	108	145	237	241	97	88
15015	951 COMMISSIONERS RD E LONDON	59	62	81	96	116	161	254	271	107	98
15016	801 COMMISSIONERS RD E LONDON	57	61	81	96	112	162	226	271	103	95
15017	8 MOUNTSFIELD DR LONDON	58	57	83	96	118	144	241	244	103	95
22904	WALPOLE S PS, SANDUSK RD NANTICOKE	49	52	76	92	111	166	213	232	99	89
26029	EDNA/FREDERICK STS KITCHENER	57	68	84	97	116	145	214	222	104	98
27056	ALLENDALE AV NIAGARA FALLS	59	66	81	97	119	149	340	499	111	101
28028	EXHIBITION ST/CLARK ST GUELPH	57	51	74	90	107	139	201	226	93	85
29001	HUGHSON/HUNTER HAMILTON	57	73	88	101	127	176	213	219	112	106

TABLE A-39 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - SULPHATE IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CU.METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
29011	BURLINGTON/LEEDS HAMILTON	57	76	98	117	133	196	235	238	124	117
29012	BURLINGTON/WELLINGTON HAMILTON	57	67	77	93	108	142	190	193	97	87
29017	CHATHAM/FRID HAMILTON	58	64	84	91	114	166	206	212	105	98
29025	BARTON/WENTWORTH HAMILTON	54	81	105	129	149	214	408	409	143	130
29087	405 CUMBERLAND AV HAMILTON	57	64	83	105	117	162	181	186	106	101
29102	467 BEACH BLVD HAMILTON	51	80	112	135	159	192	215	219	136	129
29114	VICKERS RD/EAST 18TH ST HAMILTON	43	75	95	113	127	163	223	244	117	112
31104	26 BREADALBANE TORONTO	320	52	79	97	121	175	282	425	108	95
31120	PERTH/RUSKIN(JUNCTION TRIANGLE) TORONTO	116	56	77	93	108	153	222	286	99	91
33003	LAWRENCE/KENNEDY SCARBORO	117	35	61	88	109	155	260	289	92	78
33019	REDLAND CR (SCARB BLUFFS) SCARBORO	106	52	78	102	117	156	236	245	104	95
34002	SC CTR, 770 DON MILLS RD NORTH YORK	114	34	65	86	115	151	221	277	93	80
35003	ELMCREST RD (CENTENNIAL PK) ETOBICOKE	116	53	72	82	92	123	218	238	88	82
35005	QUEENSWAY HOSPITAL ETOBICOKE	115	63	87	105	123	169	263	347	112	104
35033	EVANS/ARNOLD AV ETOBICOKE	118	71	88	99	117	154	217	297	109	104
44008	HWY2/NORTH SHORE BLVD E BURLINGTON	117	72	88	103	128	169	255	512	114	105
44015	BRONTE RD/WOBURN CRES OAKVILLE	113	63	85	98	118	158	226	328	108	101
45001	FIRE HALL, BAYLY/BROCK PICKERING	294	28	54	81	106	157	266	334	87	71
45025	PS, RITSON RD/OLIVE AV OSHAWA	111	57	90	110	125	155	203	247	110	103
46033	FIRE HALL, BRAMALEA RD BRAMALEA	48	33	61	76	102	165	285	289	92	77
46110	QUEENSWAY W/HURONTARIO ST MISSISSAUGA	114	57	79	96	113	149	197	207	98	92
47019	POST OFFICE, 17-25 PETER ST S ORILLIA	46	31	53	68	92	124	165	189	75	65
47042	ARMOURY BLDG, PARK/PARKSIDE ST BARRIE	69	51	70	92	111	151	186	213	95	85
48002	HWY47/E OF HWY48 STOUFFVILLE	115	46	70	87	111	153	207	273	93	83
59006	CITY HALL, 500 GEORGE ST PETERBORO	20	28	35	69	78	153	175	179	72	58
63005	HOSP, ARCHIBALD/ARTHUR STS THUNDER BAY	57	18	24	29	35	45	71	113	32	29

TABLE A-39 (Cont.)

ONTARIO MINISTRY OF THE ENVIRONMENT - AIR RESOURCES BRANCH

RUN DATE
JUL 08, 1988

YEAR - 1987 POLLUTANT - SULPHATE IN TOTAL SUSPENDED PARTICULATE UNIT - .1 MICROGRAMS/CUBIC METRE

STATION NUMBER	LOCATION	NO OF SAMPLES	PERCENTILES 10	30	50	70	90	99	MAX	ARITH MEAN	GEOM MEAN
63022	HOSPITAL, 35 ALGOMA ST N THUNDER BAY	56	14	23	28	34	46	67	72	30	27
63200	MTC 615 JAMES ST S THUNDER BAY	56	17	26	30	38	49	88	111	33	30
71042	PUMPHOUSE, BONNEY ST SAULT STE MARIE	42	29	65	98	115	196	357	436	107	86
71049	LAND OFFICE, QUEEN ST SAULT STE MARIE	50	41	50	63	75	109	174	195	70	64
71068	MM. MERRIFIELD SCHOOL SAULT STE MARIE	80	25	50	65	84	121	212	355	72	61
72077	MINISTRY OF HEALTH BLDG TIMMINS	32	20	26	35	48	65	102	109	40	35
75010	OPP STN NORTH BAY	39	36	57	71	88	171	244	253	86	72
77016	WATER TANK, ASH ST SUDBURY	53	49	70	87	109	167	232	250	96	82
77026	19 LISGAR ST SUDBURY	50	45	61	80	116	139	217	225	90	77
77070	PUMPHOUSE, NICKEL ST COPPER CLIFF	51	39	66	84	114	147	235	256	93	78

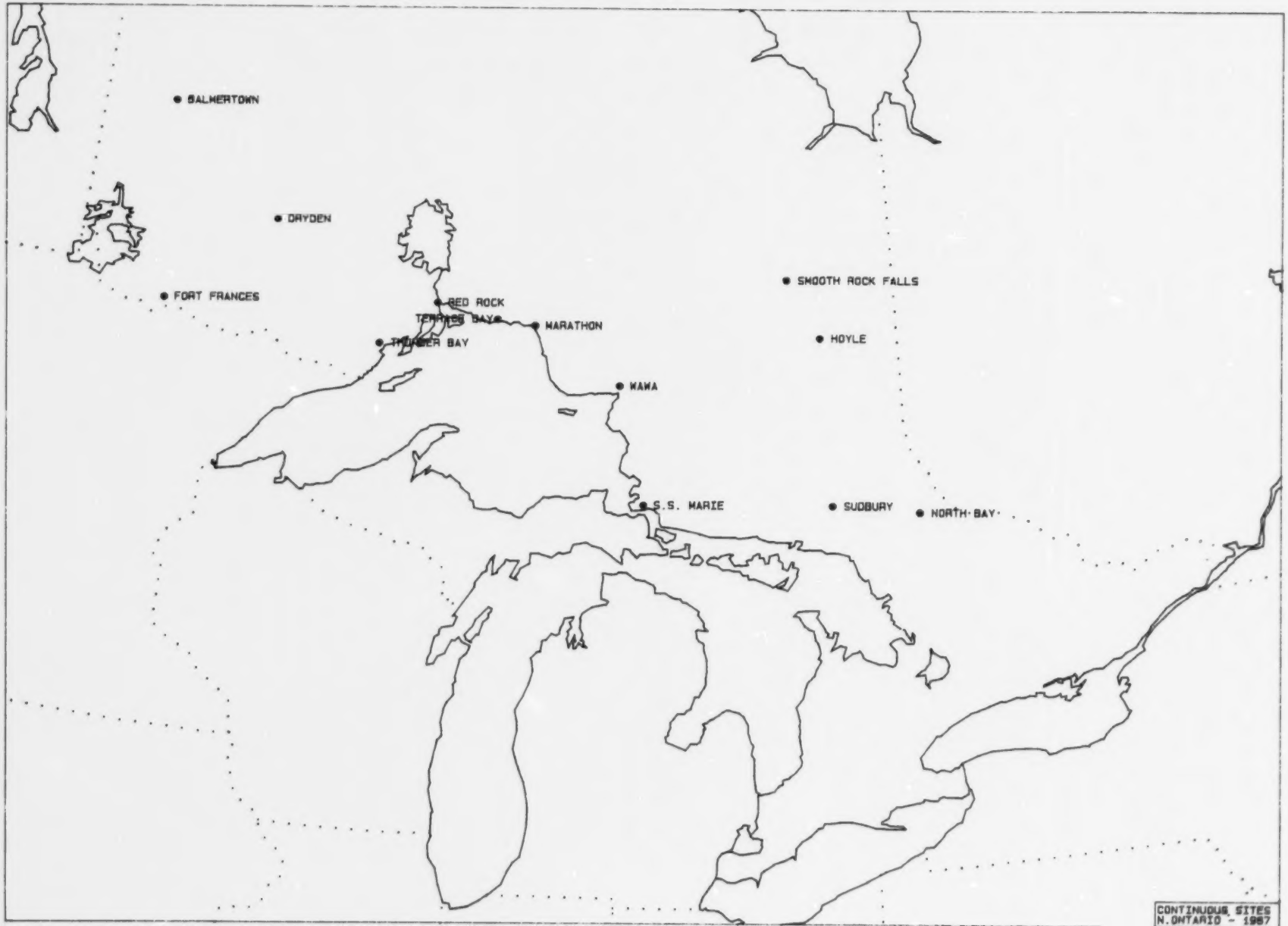
TABLE A-40 10 YEAR TREND FOR SO

Annual geometric mean (ug/m3)

City	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
BRAMALEA	8.5	9.2	9.0	8.2	8.8	9.0	10.8	7.7	8.8	7.7
CHATHAM	10.3	10.7	10.3	9.3	7.8	7.9	7.4	7.5	6.6	9.5
ETOBICOKE	10.8	12.9	13.8	12.1	11.3	8.8	9.3	7.7	8.7	8.2
HAMILTON	12.0	13.6	12.5	9.6	9.6	10.1	10.9	8.8	11.5	13.0
KITCHENER	-	11.4	11.4	9.9	8.5	7.0	7.7	5.7	7.6	9.8
LONDON	7.7	10.2	10.7	8.1	7.9	7.3	8.7	6.9	7.5	9.4
MISSISSAUGA	9.0	8.9	10.3	10.3	9.5	10.0	10.7	7.1	7.1	9.2
NORTH BAY	7.3	7.5	8.2	6.6	6.3	6.6	7.1	6.0	4.5	7.2
NORTH YORK	8.7	11.2	11.7	9.1	8.8	8.0	7.3	7.7	7.3	8.0
OSHAWA	-	10.7	10.1	9.5	8.9	8.7	8.4	7.2	8.1	10.3
PICKERING	8.2	9.5	7.6	7.2	6.6	5.8	5.8	5.7	5.7	7.1
SCARBORO	9.0	11.6	11.7	9.1	8.6	8.4	8.2	7.0	7.7	7.8
S.S. MARIE	-	-	10.1	7.8	7.7	7.0	6.8	7.2	5.1	6.4
SUDBURY	6.6	8.4	10.6	9.8	7.3	8.5	7.4	5.2	5.8	8.2
THUNDER BAY	4.4	5.4	6.5	7.8	6.4	4.0	4.3	3.5	3.6	2.9
TORONTO	8.9	13.1	12.9	10.1	9.5	8.7	8.0	7.3	8.0	9.5
WINDSOR	12.3	12.7	12.6	12.0	9.9	8.7	8.6	8.5	10.5	11.3

MAP 1 LOCATIONS OF CONTINUOUS MONITORING – S. ONTARIO

MAP 2 LOCATIONS OF CONTINUOUS MONITORING – N. ONTARIO



MAP 3 LOCATIONS OF DAILY MONITORING – S. ONTARIO

MAP 4 LOCATIONS OF DAILY MONITORING – N. ONTARIO